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FOR
DRAFT SCREENING SITE INSPECTION REPORT
FOR
BLUE LAKE
INDIANAPOLIS, INDIANA
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1. INTRODUCTION

Ecology and Environment, Inc. (E & E), Field Investigation Team (FIT) was tasked by the United States Environmental Protection Agency (U.S. EPA) to conduct a screening site inspection (SSI) of the Blue Lake Inc (BL) site under contract number 68-01-7347. C.C. Johnson and Malhotra, P.C. (CCJM), a subcontractor to E & E under the above contract, was responsible for conducting this investigation.

The BL site was discovered by U.S. EPA on November 1, 1986, in response to Section 3001 of the Resource Conversation and Recovery Act (RCRA). The site was evaluated in the form of a preliminary assessment (PA) that was submitted to U.S. EPA. The PA was prepared by Gary Mills of the Indiana Department of Environmental Management (IDEM) and is dated February 9, 1988 (U.S. EPA 1988).

FIT prepared a SSI work plan for the BL site under technical directive document (TDD) F05-9009-007, issued on September 5, 1990. The SSI work plan was approved by U.S. EPA on March 25, 1991. The SSI of the BL site was conducted on May 15, 1991, under amended TDD F05-9009-007, issued on May 17, 1991.

The FIT SSI included an interview with a site representative, a reconnaissance inspection of the site, and the collection of 10 soil, sludge, and sediment samples and 3 residential well samples.

The purposes of an SSI have been stated by U.S. EPA in a directive outlining Pre-Remedial Program strategies. The directive states:

> All sites will receive a screening SI to 1) collect additional data beyond the PA to enable a more refined preliminary HRS [Hazard Ranking System] score, 2) establish priorities among sites most likely to qualify for the NPL [National Priorities List], and 3) identify the most critical data requirements for the listing SI step. A screening SI will not have rigorous data quality objectives (DQOs). Based on the refined preliminary HRS score and other technical judgement factors, the site will then either be designated as NFRAP [no further remedial action planned], or carried forward as an NPL listing candidate. A listing SI will not automatically be done on these sites, however. First, they will go through a management evaluation to determine whether they can be addressed by another authority such as RCRA [Resource Conservation and Recovery Act].... Sites that are designated NFRAP or deferred to other statutes are not candidates for a listing SI.
>
> The listing SI will address all the data requirements of the revised HRS using field screening and NPL level DQOs. It may also provide needed data in a format to support remedial investigation work plan development. Only sites that appear to score high enough for listing and that have not been deferred to another authority will receive a listing SI. (U.S. EPA 1988a)

U.S. EPA Region V has also instructed FIT to identify sites during the SSI that may require removal action to remediate an immediate human health or environmental threat.

2. SITE BACKGROUND

2.1 INTRODUCTION

This section presents information obtained from SSI work plan preparation, the site representative interview, and the reconnaissance inspection of the site.

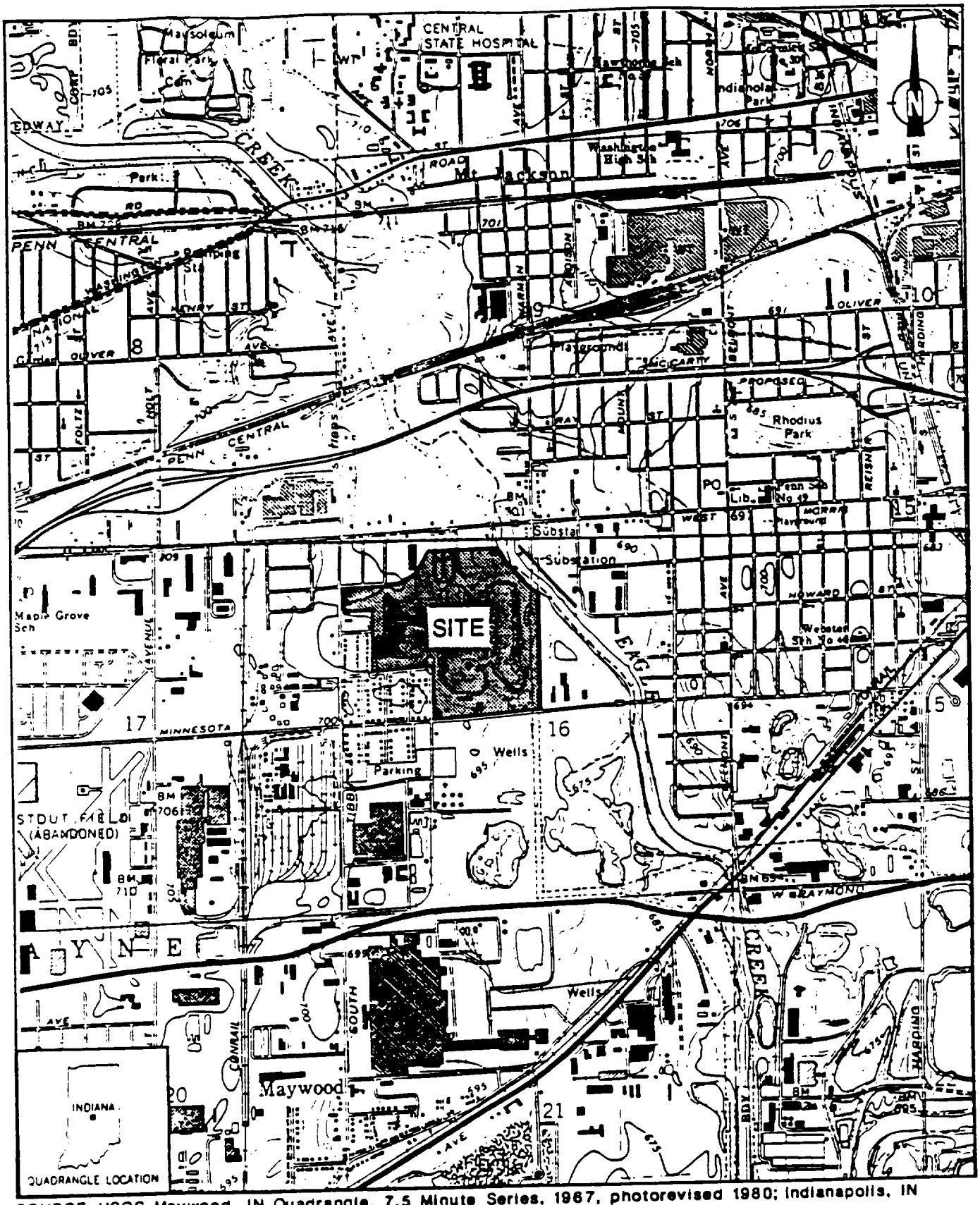
2.2 SITE DESCRIPTION

The BL site is an active solid waste landfill used for the disposal of foundry sand, building material debris, and wastewater sludge. The site area is approximately 86 acres (Hurt 1991) and is located on the southwest side of Indianapolis in Marion County, Indiana (E1/2NW1/4 sec.16, T.15N., R.3E.) (see Figure 2-1 for site location). A surface water body, Blue Lake, is located on the eastern part of the site. The site is located in a residential/industrial area. The site address is 3023 Morris Street, Indianapolis, Indiana (U.S. EPA 1988).

A 4-mile radius map of the BL site is provided in Appendix A.

2.3 SITE HISTORY

Ownership of the BL site before the 1950s is not known. During 1950s and 1960s, Blue Lake, Inc. (BLI), whose president is Jack D. Hurt, acquired the current site property as the result of a series of sequential parcel purchases (Hurt 1991). BLI purchased the parcels from various owners, including James Hurt (father of Jack Hurt) and the State of Indiana Industrial Development Department.



SOURCE: USGS Maywood, IN Quadrangle, 7.5 Minute Series, 1967, photorevised 1980; Indianapolis, IN Quadrangle, 7.5 Minute Series, 1967.

SCALE

0 ½ 1 MILE

FIGURE 2-1 SITE LOCATION

Unknown parts of the site have been used as a solid waste landfill since 1927 and have been used to dispose of foundry sand and building demolition debris in gravel pits (Indiana State Board of Health (ISBH) 1985b; Indiana Environmental Management Board (IEMB) 1985). Before the 1950s and 1960s, another part of the site area was used for field tracks, a tavern, and gravel pits. Approximately 30 acres of the site were used as gravel pits, and later the pits were used as a landfill (Hurt 1991). In a 1952 City Directory of Indianapolis, the site area was noted as an amusement park (Cordell 1991). Blue Lake was used as a private fishing club from an unknown date to 1989 (Hurt 1991).

BLI started operating the landfill in the 1950s without obtaining state or local permits or licenses (Hurt 1991). According to Hurt, BLI filed a bond with the City of Indianapolis, Department of Public Works, to operate a solid waste landfill on the site in the 1950s. The bond was filed to operate a solid waste landfill in accordance with the rules and regulations of the City of Indianapolis (Hurt 1991). Later status of the bond is not known.

On July 3, 1973, Hurt filed an application to operate a solid waste landfill on the site for disposal of foundry sand and construction debris with the Division of Sanitary Engineering of ISBH. The application listed solid and noncombustible materials as the wastes to be disposed of (ISBH 1973). On August 22, 1973, ISBH granted permission to BLI for the operation of a solid waste landfill limited to the disposal of inorganic and noncombustible materials such as sand, bricks, concrete, and stone. Disposal of putrescible material, combustible material, or sludge was not permitted (Dove 1973).

Hurt's 1973 application stated that the landfill would be composed of three layers: a bottom layer, an intermediate layer, and a final cover. The bottom layer would consist of foundry sand, refuse, dirt, and gravel and would act as a base platform layer. The intermediate layer would extend from the top of the platform layer to within 5 feet of the final grade. This layer would be composed of nonputrescible wastes and demolition debris and would be compacted and covered with sand. A final cover would be placed over the wastes and would be a minimum of 5 feet thick. The final cover would consist of natural sand, foundry sand, dirt, and gravel. It was estimated that 785,000 cubic

yards of cover material were available on-site in July 1973 (ISBH 1973).

The BL site began receiving foundry sand and bag house dust from the Chrysler Corporation-Indianapolis Foundry in the 1950s (Hurt 1991). After constructing a wastewater treatment plant in 1967, Chrysler began generating approximately 500 tons per day of wastewater treatment sludge and deposited the sludge on the BL site from 1967 to 1984. The sludge contained RCRA-designated D006 (cadmium) and D008 (lead) hazardous waste constituents (ISBH 1985b). Wastes received from Chrysler were being deposited on the western part of the site. Before disposal, the wastewater sludge was mixed with other wastes to solidify the sludge (ISBH 1985). The waste received from other facilities was deposited on the northern and eastern banks of Blue Lake (Hurt 1991).

Kenneth Smock Associates, Inc. (Smock), of Indianapolis, had a contract for transporting waste from Chrysler to the BL site. Smock did not notify U.S. EPA that hazardous waste sludge was being transported to the BL site. Smock obtained neither waste transport manifests nor a U.S. EPA identification number as a transporter of hazardous waste (ISBH 1985). Currently, the Norris Trucking Company, of Indianapolis, has the contract for transporting demolition debris to the BL site (Hurt 1991).

The BL site has been inspected in the past by various regulatory agencies, including the U.S. EPA, ISBH, the Marion County Health and Hospital Corporation (MCHH), and the City of Indianapolis-Air Pollution Control Department (I-APCD). IDEM assumed control and regulation of waste disposal facilities within the state of Indiana from ISBH in 1985.

During the July 21, 1975, inspection, ISBH officials observed a truckload of garbage in the landfill, although the landfill was not permitted to accept putrescible waste (ISBH 1975). FIT file information contains no record of inspections that may have occurred between 1976 and 1981.

During ISBH inspections on March 9 and April 1, 1982, officials observed that calcium carbonate was accepted along with foundry sand from Chrysler. These materials were deposited on the southwest side of the site (ISBH 1982).

An ISBH inspection of the site on February 27, 1985, revealed that foundry sand and other waste seen during an inspection of Chrysler the

previous day were deposited on the BL site (ISBH 1985). On August 7, 1985, IEMB issued a Complaint, Notice of Hearing, and Proposed Final Order, Cause No. N-238, against several respondents involved in disposal activities on the BL site (IEMB 1985). Because of hearings regarding the complaints, the issuance of a final order was delayed (ISBH 1985a; IEMB 1987).

ISBH inspected the BL site on October 30, 1985, and collected three samples from unidentified waste materials on-site. The samples were analyzed by EMS Laboratories, Inc., of Indianapolis. Among the TAL analytes detected in the samples were cadmium (270 ug/g), lead (24,000 ug/g), nickel (110 ug/g), arsenic (75 ug/g), chromium (95 ug/g), mercury (0.3 ug/g), and silver (77 ug/g) (ISBH 1985b).

On November 13, 1986, IDEM informed U.S. EPA that the BL site had accepted hazardous waste sludge from 1967 to February 20, 1984, without notifying U.S. EPA and that BLI had never applied for a RCRA part A interim status permit for on-site hazardous waste disposal. IDEM requested that the BL site be added to the U.S. EPA list of land disposal facilities located in Indiana (Gray 1986). U.S. EPA added the BL site to the list on March 5, 1987 (Boyle 1987).

On May 13, 1987, I-APCD informed IDEM of an air pollution problem at the site. BLI was cited for a violation of fugitive dust regulations at the BL site. Additionally, there were reports of alleged respiratory health effects on residents of the I-70 Mobile Home Park located northwest of the BL site. Also, residents alleged that drums were illegally dumped at the BL site (I-APCD 1987). During a complaint investigation inspection on July 30, 1987, IDEM observed several empty barrels, which had been disposed of along with foundry sand from Chrysler (IDEM 1987).

On June 28, 1987, IEMB issued a Notice of Violation, Amended Complaint and Order, Cause No. N-238, based on the original complaint filed on August 7, 1985 (IEMB 1985, 1987). The notice was filed against the respondents BLI, Jack and Beverly Hurt of BLI, Chrysler, Smock, and Thomas M. Fansler, Jr., of Smock, regarding activities on the BL site (IEMB 1987).

The primary findings of this complaint included the following.

- o BLI and the Hurts constructed and operated a hazardous waste disposal facility without a permit.
- o The respondents did not comply with appropriate standards for generating, transporting, and disposing of hazardous wastes.
- o Chrysler offered hazardous wastes without the required manifests to a transporter and to a disposal facility that had not received a U.S. EPA identification number (IEMB 1987).

IEMB ordered that 1) BLI, Fansler, and Jack and Beverly Hurt should submit a RCRA part A application specifying the disposal of wastewater sludge within 30 days from the date of the order; 2) BLI should submit a closure plan with an appropriate timetable within 60 days; 3) BLI should implement the closure plan within 30 days of its approval; 4) a civil penalty of $860,300 should be paid by the respondents within 30 days; and 5) Chrysler should assess site damage and take remedial actions at the site (IEMB 1987). As of March 23, 1990, the action was pending and Chrysler was appealing the order (IDEM 1990; Indiana Court of Appeals 1989).

The Oil Equipment Supply Corporation (OESC) and the Indianapolis Board of Flood Control (IBFC) were also originally listed as respondents in the 1985 complaint. According to Hurt, OESC has deposited their wastes (with unknown characteristics) at the BL site. During the 1960s, a storm water sewer operated by IBFC was blocked and storm water entered Blue Lake. Medical wastes were allegedly observed in the lake at this time, possibly from the sewer blockage (Hurt 1991). Finally, OESC and IBFC were dismissed without prejudice by IEMB based on the recommendation of a hearing officer on March 31, 1986 (Pickard 1986).

On February 16, 1988, IDEM officials inspected the BL site and found that foundry sand and cores continued to be disposed of on the site. A small amount of solid waste and trash bags were also observed on the site (IDEM 1988). On April 14, 1988, IDEM officials informed Hurt of the revised State of Indiana Solid Waste Rule, which was excepted to become effective in September 1988. Hurt was asked to submit a completed application along with waste characterization for a restricted waste site, and to do so at least 90 days before the new rule

became effective. IDEM indicated that landfilling must be halted on the date the rule became effective if this request was not followed (Poe 1988).

An analysis of the Chrysler wastes being disposed of on the BL site was submitted to BLI and IDEM on June 8, 1988, by Larry P. White of Chrysler. Among the substances detected in the waste stream samples were chloride (240 mg/l), cadmium (0.18 mg/l), lead (11 mg/l), cyanide (0.12 mg/l), fluoride (8.5 mg/l), nickel (2.3 mg/l), sodium (130 mg/l), zinc (0.36 mg/l), sulfate (570 mg/l), boron (0.45 mg/l), and phenols (0.19 mg/l) (White 1988).

On August 22, 1988, IDEM officials inspected the BL site and observed that some wastes were wet when received at the BL site. These wastes were allowed to dry in a dike area before being spread on the site (IDEM 1988a).

On December 10, 1988, Chrysler stopped sending foundry sand or other wastes to the BL site. Since 1988, the BL site has received only occasional loads of demolition debris, which is being disposed in the area north of Blue Lake (Hurt 1991).

On March 23, 1990, IDEM officials conducted a scheduled inspection of the BL site. They did not observe any new violations or any recent dumping. Action pertaining to the violation notice issued in 1987 was still pending (IDEM 1990). During an October 23, 1990, inspection of the BL site, MCHH officials collected surface water samples from Blue Lake. Among the substances detected were copper (13 ug/L), iron (515 ug/L), lead (138 ug/L), nickel (72 ug/L), and grease and oil (6.1 mg/L) (MCHH 1990). Until November 1990, residents in the house located on the south side of the BL site used the lake for fishing and swimming. Residents alleged that swimming in the lake caused a child to be born with birth defects. MCHH posted a sign stating that swimming and fishing in the lake were prohibited after November 1990 (Wooten 1990).

Hurt has filed a lawsuit against Chrysler for unauthorized use and illegal dumping of hazardous waste sludge at the BL site (Hurt 1991). The date or status of the lawsuit is not known.

According to FIT file information, no remedial response activities have been undertaken at the BL site.

3. *SCREENING SITE INSPECTION PROCEDURES AND FIELD OBSERVATIONS*

3.1 INTRODUCTION

This section outlines procedures and observations of the SSI of the BL site. Individual subsections address the site representative interview, reconnaissance inspection, and sampling procedures. Rationales for specific FIT activities are also provided. The SSI was conducted in accordance with the U.S. EPA-approved work plan.

The U.S. EPA Potential Hazardous Waste Site Inspection Report (Form 2070-13) for the BL site is provided in Appendix B.

3.2 SITE REPRESENTATIVE INTERVIEW

Parimal Mehta of FIT conducted a telephone interview with Jack D. Hurt, owner of the BL site, on July 5, 1991. The interview began at 11:00 a.m. The interview was conducted by telephone because Hurt resides in Florida. The interview was conducted to gather information that would aid FIT in preparing the SSI report.

3.3 RECONNAISSANCE INSPECTION

FIT conducted a reconnaissance inspection of the BL site and surrounding area in accordance with E & E health and safety guidelines. The reconnaissance inspection began at 9:40 a.m. on May 15, 1991, and included a walk-through of the site to determine appropriate health and safety requirements for conducting on-site activities and to make observations to aid in characterizing the site. FIT also determined sampling locations during the reconnaissance inspection. FIT was

accompanied by Vickie Cordell of IDEM during the reconnaissance inspection.

Reconnaissance Inspection Observations. Eagle Creek borders the site on the northeast, electric power transmission lines border the site on the east, Minnesota and Miller streets border the site on the south, Tibbs Avenue borders the site on the west, and Morris Street borders the site on the north (see Figure 3-1 for site features). The I-70 Mobile Home Park is located adjacent to the northwest side of the site. The I-70 Mobile Home Park is part of the property owned by BLI, but is not part of the BL site. Residential areas are located adjacent to the northwest and southwest sides of the site. Blue Lake is located on the east side of the site. The BL site is partially fenced on the west, north, and east sides. FIT entered the site from an entrance gate on the west side of the site on Tibbs Avenue.

Piles of foundry sand were observed on the west and northwest sides of Blue Lake. The elevation difference between the foundry sand piles and Blue Lake is approximately 20 feet. North of the piles of foundry sand is a ravine in which a pond of standing water was observed. Between the piles of foundry sand and Blue Lake, a sludge disposal area was observed. Cordell stated that Chrysler disposed of their wastewater treatment sludge in this area. A surface water runoff channel from the sludge disposal area to Blue Lake was visible.

The area southwest of Blue Lake is at an elevation of approximately 20 feet higher than the lake. Foundry sand and calcium carbonate from Chrysler were observed in this area. In the lower elevational area, near the west bank of the lake, a small depression filled with standing water was observed.

An area north of the lake was used to dispose of demolition debris. A sign stating that this area is a dump area was posted. Abandoned vehicles were observed on the east side of the dump area and along the north bank of Blue Lake.

Along the east bank of the lake, FIT observed heavy vegetation and many trees. FIT did not observe recent waste deposition on the east side of the BL site. A shallow dike was constructed in the southern part of the lake. The dike was constructed to divide the lake into two parts during the low water season and to prevent the contamination of

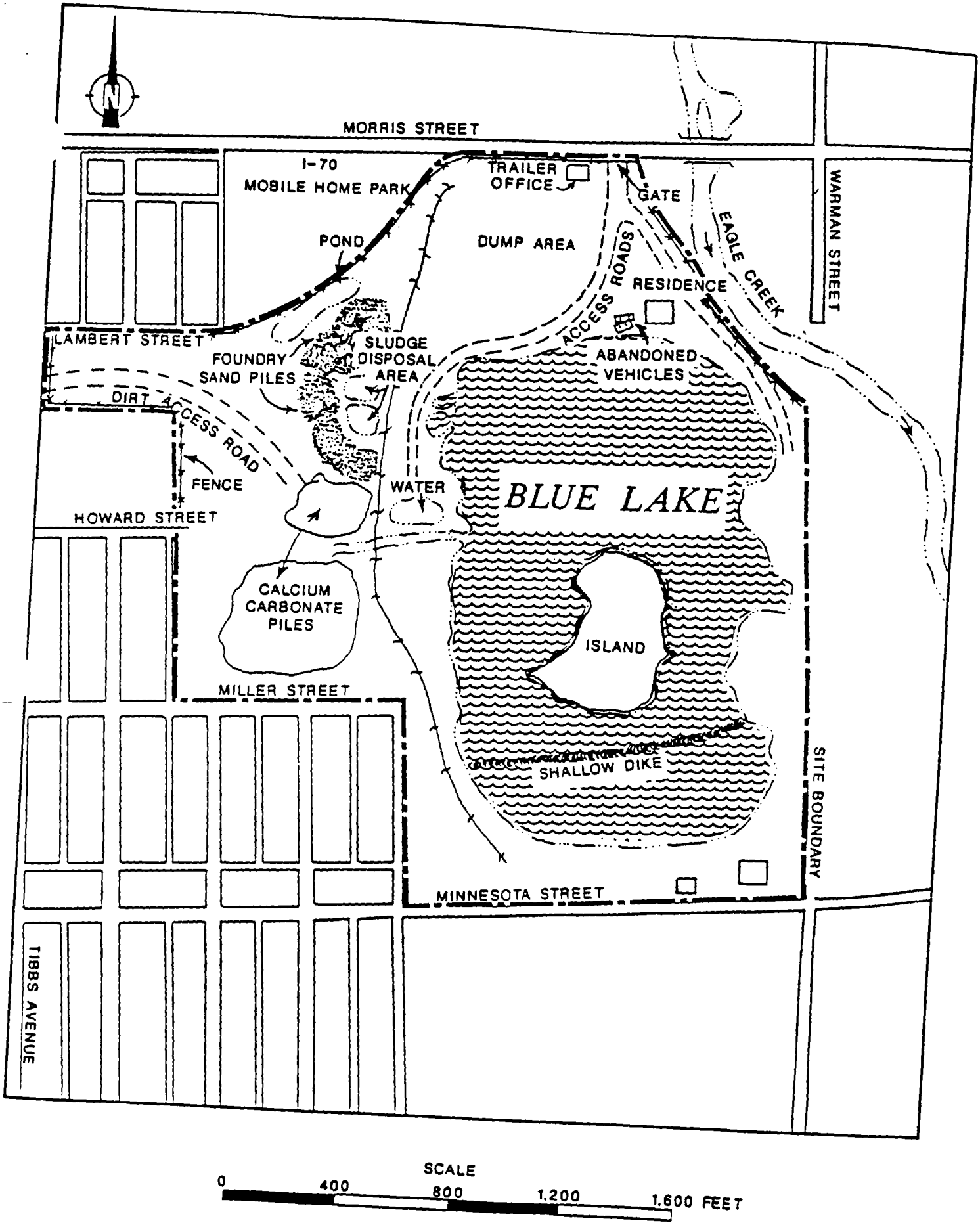


FIGURE 3-1 SITE FEATURES

the southern part of the lake. Surface water runoff from the east side of the site did not appear to flow toward Eagle Creek because the east side of the site is at a higher elevation and is heavily vegetated.

There are two houses on-site on the southern side of the lake. The site is not fenced on the southern side. Several empty rusted drums were observed at various locations on the BL site.

During the SSI, FIT observed a Norris Brothers Company truck, of the Norris Trucking Company, enter the site and dump demolition debris near the gate on the west side of the site.

FIT photographs from the SSI of the BL site are provided in Appendix C.

3.4 SAMPLING PROCEDURES

Samples were collected by FIT at locations selected during the reconnaissance inspection to determine whether U.S. EPA Target Compound List (TCL) compounds or Target Analyte List (TAL) analytes were present at the site. The TCL and TAL are included with corresponding quantitation/detection limits in Appendix D.

On May 15, 1991, FIT collected 10 soil, sludge, and sediment samples, including two potential background samples, and 3 residential well samples. An offer to provide the site representative with a portion of the soil, sludge, and sediment samples was accepted by an employee of Hurt's who controls access to the site and manages the I-70 Mobile Home Park.

Soil, Sludge, and Sediment Sampling Procedures. Surface soil samples S1 was collected from the piles of foundry sand and on the western side of Blue Lake (see Figure 3-2 for on-site soil, sludge, and sediment sampling locations). Sample S1 consisted of gray-black sand. Surface sludge sample S2 was collected from the sludge disposal area. Sample S2 consisted of black sludge.

Subsurface soil samples S5 was collected near the foundry sand piles and consisted of brown sandy silt. Subsurface soil sample S6 was collected from the lower area west of the lake and consisted of black silty sand. Subsurface soil sample S7 was collected from an area above the west side of the lake and consisted of gray sand.

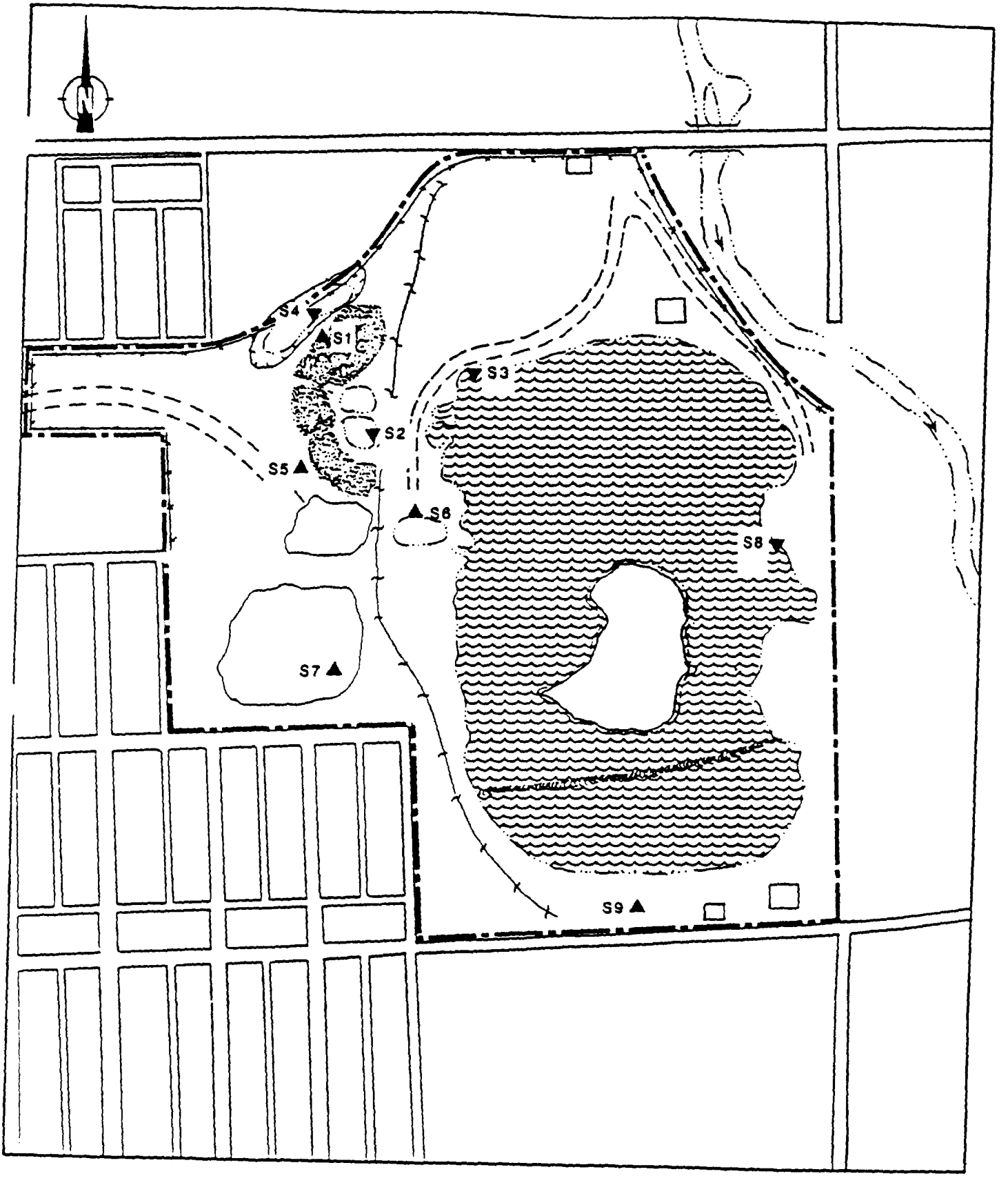


FIGURE 3-2 ON-SITE SOIL, SLUDGE, AND SEDIMENT SAMPLING LOCATIONS

Surface soil sample S1, surface sludge sample S2, and subsurface soil samples S5, S6, and S7 were collected to aid in characterizing the wastes present on the BL site.

Surface sediment sample S3 was collected from the northwestern bank of the lake and consisted of black sand. Surface sediment sample S4 was collected from the northwestern part of the site, in the ravine area near the pond of standing water, north of sampling location S1. Sample S4 consisted of black sand. Surface sediment sample S8 was collected from the east bank of the lake. Sample S8 consisted of brown sand.

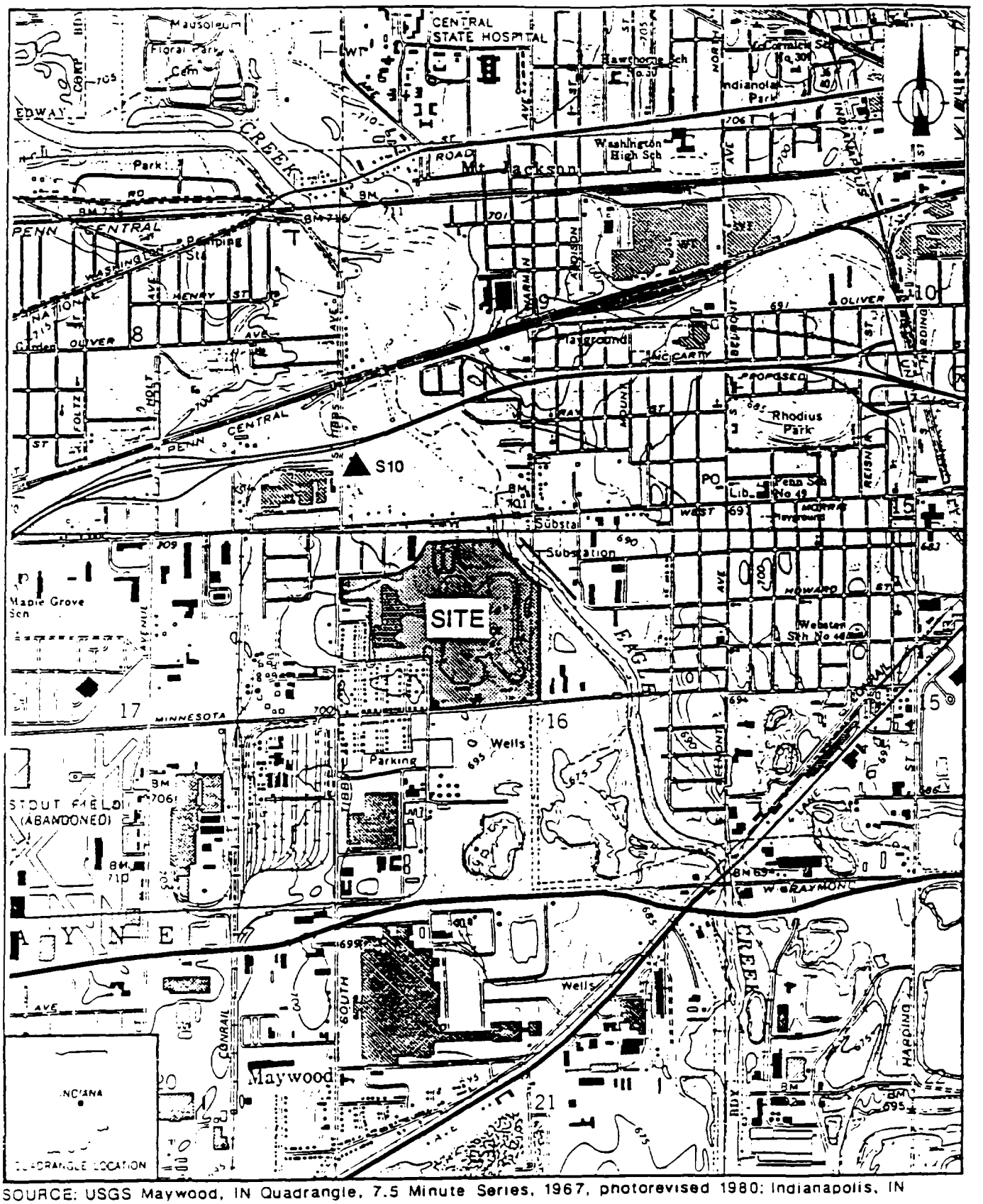
Surface sediment samples S3, S4, and S8 were collected because they were located along surface water migration pathways to the existing on-site surface water bodies.

Surface soil sample S1, sludge sample S2, and sediment samples S3, S4, and S8 were collected at depth from 0 to 6 inches. Subsurface soil samples S5, S6, and S7 were collected at an approximate depth of 2 feet.

Two potential background soil samples, S9 and S10, were collected during the SSI of the BL site. Subsurface soil sample S9 was collected near one of the residences in the area south of the lake. Sample S9 was collected at an approximate depth of 2 feet. Sample S9 consisted of brown sandy silt. Surface soil sample S10 was collected from approximately 0.3 miles north of the site (see Figure 3-3 for off-site soil sampling location). Sample S10 was collected near a private residence and consisted of brown sandy loam. Sample S10 was collected at depth from 0 to 6 inches.

Samples S9 and S10 were collected to assess the representative chemical composition of the soil in the area of the site. Surface samples S1, S2, S3, S4, S8, and S10 were collected using a hand trowel and stainless steel spoon. Subsurface samples S5, S6, S7, and S9 were collected using a hand auger, shovel, hand trowel, and stainless steel spoon.

The sample portions collected for volatile organic analysis were transferred directly to sample bottles. The remaining sample portions were placed into a stainless steel bowl, mixed, and then transferred to the appropriate sample bottles, using a stainless steel spoon (E & E 1987).



SOURCE: USGS Maywood, IN Quadrangle, 7.5 Minute Series, 1967, photorevised 1980; Indianapolis, IN Quadrangle, 7.5 Minute Series, 1967.

SCALE

0 ½ 1 MILE

FIGURE 3-3 OFF-SITE SOIL SAMPLING LOCATION

Standard E & E decontamination procedures were adhered to during the collection of all soil, sludge, and sediment samples. The procedures included the scrubbing of all equipment (e.g., hand trowels, shovels, hand augers, and stainless steel spoons) with a solution of detergent (Alconox) and distilled water, and triple-rinsing the equipment with distilled water before the collection of each sample (E & E 1987). All soil, sludge, and sediment samples were packaged and shipped in accordance with U.S. EPA-required procedures.

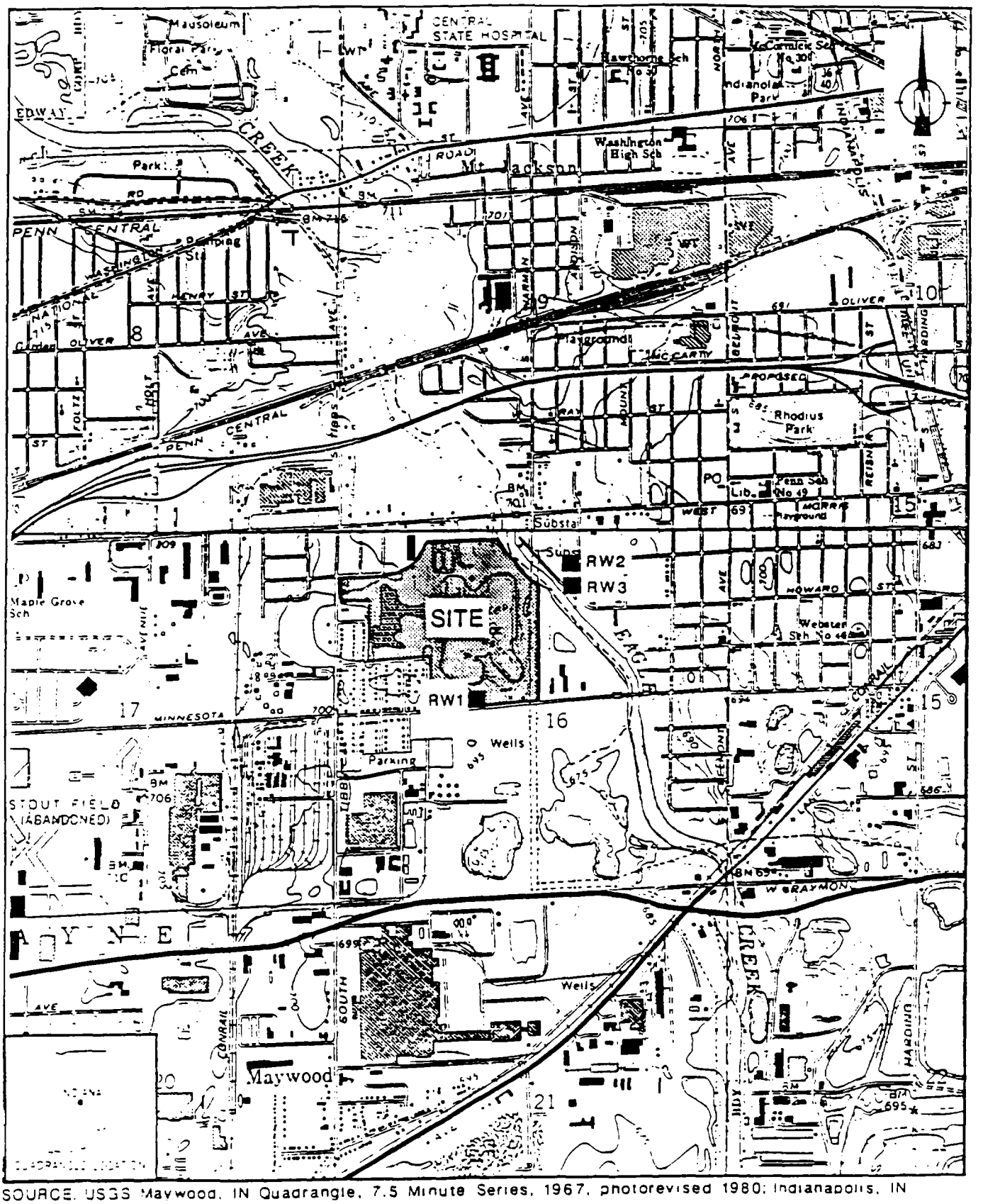
As directed by U.S. EPA, all soil, sludge, and sediment samples were analyzed using the U.S. EPA Contract Laboratory Program (CLP).

Residential Well Sampling Procedures. Three residential well samples were collected on May 15, 1991. Samples RW1, RW2, and RW3 were collected to determine whether TCL compounds and TAL analytes had migrated from the site to groundwater in the area of the site.

Residential well sample RW1 was collected from a residence on the southern part of the site. Based on the groundwater flow direction in the area of the BL site, samples RW2 and RW3 are considered to be potential upgradient well samples (Rivers 1991). Potential upgradient well samples RW2 and RW3 were collected from commercial facilities approximately 0.25 miles east of the site (see Figure 3-4 for residential well sampling locations and Table 3-1 for addresses and depths of FIT-sampled residential wells).

All residential well samples were obtained from outlets that bypassed water treatment systems and storage tanks. Water was allowed to discharge from the outlets for 15 minutes before samples were collected to ensure that the sample sources had been purged of standing water (E & E 1987). In accordance with U.S. EPA quality assurance/quality control (QA/QC) requirements, a duplicate residential well sample and a field blank sample were collected. The duplicate sample was collected from location RW1. The field blank sample was prepared from distilled water.

As directed by U.S. EPA, all residential well samples were analyzed using U.S. EPA CLP.



SOURCE: USGS Maywood, IN Quadrangle, 7.5 Minute Series, 1967, photorevised 1980; Indianapolis, IN Quadrangle, 7.5 Minute Series, 1967.

FIGURE 3-4 RESIDENTIAL WELL SAMPLING LOCATIONS

Table 3-1

ADDRESSES AND DEPTHS OF FIT-SAMPLED RESIDENTIAL WELLS

Sample	Well Depth (feet)	Address
RW1 (and Duplicate)	Unknown	2840 Minnesota Street Indianapolis, Indiana 46221
RW2	92	1300 S. Bedford Street Indianapolis, Indiana 46221
RW3	94	1306 S. Bedford Street Indianapolis, Indiana 46221

4. ANALYTICAL RESULTS

This section presents the results of the chemical analysis of soil, sludge, sediment, and residential well samples collected by FIT during the SSI of the BL site. All samples were analyzed for volatile organics, semivolatile organics, pesticides/polychlorinated biphenyls (PCBs), metals, and cyanide. Complete chemical analysis results of FIT-collected soil, sludge, sediment, and residential well samples are provided in Tables 4-1 and 4-2. In addition, significant tentatively identified compounds (TICs) detected in the analysis of FIT-collected samples are provided in Table 4-1.

Quantitation/detection limits used in the analysis of FIT-collected samples are provided in Appendix D.

The analytical data from the chemical analysis of FIT-collected samples for this SSI have been reviewed under the direction of U.S. EPA for validity; the review has been approved by U.S. EPA. The analytical data have also been reviewed by FIT for usability. Any additions, deletions, or changes resulting from review of the data have been incorporated in the chemical analysis results tables presented in this section.

Tab.
RESULTS OF CHEMICAL ANALYSIS OF
FIT-COLLECTED SOIL, SLUDGE, AND SEDIMENT SAMPLES
FOR THE BL SITE SSI

Sample Collection Information and Parameters	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
Date	05/15/91	05/15/91	05/15/91	05/15/91	05/15/91	05/15/91	05/15/91	05/15/91	05/15/91	05/15/91
Time	1120	1136	1225	1250	1415	1230	1340	1425	1405	1745
CLP Organic Traffic Report Number	EDK11	EDK12	EDK13	EDK14	EDK15	EDK16	EDK17	EDK18	EHZ34	EHZ35
CLP Inorganic Traffic Report Number	MECT10	MECT11	MECT12	MECT13	MECT14	MECT15	MECT16	MECT17	MEHN14	MEHN15
Compound Detected (values in ug/kg)										
Volatile Organics										
methylene chloride	170	—	80	77	65	55	36	—	—	29
acetone	180	—	52	13	150	14	120	22	—	—
chloroform	4J	—	—	2J	—	—	—	—	—	—
2-butanone (MEK)	—	—	10J	—	—	—	—	5J	—	—
1,1,1-trichloroethane	13	—	6J	—	—	3J	—	—	—	—
trichloroethene	5J	—	—	—	—	—	—	—	—	—
benzene	—	15	—	—	—	—	—	—	—	—
tetrachloroethene	10	—	3J	3J	3J	3J	3J	—	2J	2J
toluene	5J	15	—	—	3J	—	3J	—	—	—
1,1,2,2-tetrachloroethane	7	—	—	3J	3J	—	—	—	—	2J
ethylbenzene	6	—	—	—	2J	—	2J	—	—	—
styrene	4J	—	—	—	3J	—	2J	—	—	—
xylenes (total)	27x	11x	—	—	8x	6x	11x	—	—	—
Semivolatile Organics										
phenol	—	1,300	—	120J	790	—	—	—	—	—
2-methylphenol	—	8,900	—	—	—	—	—	—	—	—
2,4-dimethylphenol	—	4,100	—	—	—	—	—	—	—	—
naphthalene	100J	5,100	—	—	28J	120J	—	—	—	—
2-methylnaphthalene	120J	7,500	—	65J	110J	160J	—	—	—	—
acenaphthene	—	140J	—	—	—	—	—	—	70J	—
dibenzofuran	—	610J	—	—	—	—	—	—	—	—
fluorene	—	500J	—	—	—	—	—	—	—	—
phenanthrene	51J	2,000	270J	55J	—	78J	—	—	130J	380
anthracene	—	270J	—	—	—	—	—	—	—	49J
di-n-butylphthalate	160J	270J	180J	120J	94J	62J	57J	65J	30J	2,500
fluoranthene	—	1,400	570J	150J	—	110J	—	60J	290J	700
pyrene	—	830	420J	110J	33J	72J	—	—	290J	570
butylbenzylphthalate	—	—	—	—	—	—	—	—	—	60J
benzo[a]anthracene	—	460J	250J	51J	—	54J	—	—	150J	280J

— Not detected.

Sample Collection Information and Parameters	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
Semivolatile Organics, Cont.										
chrysene	—	540J	270J	90J	—	—	—	—	170J	360J
bis(2-ethylhexyl)phthalate	—	94J	—	—	—	—	—	—	—	38J
benzo[b]fluoranthene	—	740	470J	220J	—	100J	—	—	—	580
benzo[a]pyrene	—	250J	210J	—	—	—	—	—	160J	210J
indeno[1,2,3-cd]pyrene	—	150J	120J	79J	—	—	—	—	180J	180J
dibenzo[a,h]anthracene	—	—	—	—	—	—	—	—	77J	38J
benzo[g,h,i]perylene	—	—	120J	69J	—	—	—	—	210J	180J
TICs+										
naphthalene, 1-methyl (8CI9) (90-12-0)	—	1,400J	—	—	—	—	—	—	—	—
naphthalene, dimethyl naphthalene isomers (581-40-8)	—	2,500J	—	—	—	—	—	—	—	—
naphthalene, dimethyl naphthalene isomers (569-41-5)	—	3,200J	—	—	—	—	—	—	—	—
naphthalene, dimethyl naphthalene isomers (571-61-9)	—	1,800J	—	—	—	—	—	—	—	—
naphthalene, dimethyl naphthalene isomers (573-98-8)	—	1,900J	—	—	—	—	—	—	—	—
tridecane (8CI9CI) (629-50-5)	—	1,100J	—	—	—	—	—	—	—	—
pentadecane, 2, 6, 10, 14 - tetra (1921-70-6)	—	1,400J	—	—	—	—	—	—	—	—
Analyte Detected (values in mg/kg)										
aluminum	4,660	9,700	17,300	1,360	18,000	2,100	45,200	18,000	5,640	4,090
antimony	—	—	—	—	—	—	—	8.3BNJ	—	—
arsenic	—	6.2	2.8B	—	2.2	1.8B	—	0.68B4J	5.2s	4
barium	230	210	29B	22.9B	396	40.5B	937	291	34.7B	45.6
beryllium	0.61B	1.5B	1.6B	—	2.3	—	3.7	1.6	0.3B	0.32B
cadmium	—	—	2.2	—	0.9B	0.47B	4.4	0.39B	0.56B	1.1
calcium	10,700*J	13,200*J	48,400*J	2,480*J	49,800*J	8,100*J	126,000*J	64,000*J	83,000*J	25,900*J
chromium	4.1	7.9	32	4.4	67.7	6.4	84.1	29.2	15.2	10.6
cobalt	—	2.7B	2.1B	—	3.5B	1.3B	—	—	4.1B	4B
copper	2.7BNJ	8.8BNJ	50.5NJ	19.7NJ	73.8NJ	22.3NJ	32.1NJ	15.5NJ	44.2NJ	90.2NJ
iron	1,580	7,580	8,540	3,110	15,700	5,110	3,760	3,260	10,600	12,200
lead	2.4	22.7	162NJ	19.9	129NJ	28.8	346NJ	21	77.3NJ	139NJ
magnesium	1,160	3,340	3,610	540B	2,060	2,530	5,880	10,300	15,500	11,300
manganese	141	230	1,420	79.1	1,140	124	4,240	1,730	390	379
mercury	—	—	0.18	—	—	0.11	—	—	—	0.53
nickel	2.2B	10.4B	12.1B	6.5B	42.6	17	5B	5.6B	15.4	12.5

— Not detected.
+ TIC Chemical Abstracts Service (CAS) numbers, if available, are provided in parentheses.

H-1 (Cont.)

Sample Collection Information and Parameters	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
Analyte Detected (Cont.)										
potassium	148B	361B	659B	108B	367B	165B	1,370	611B	682B	529B
selenium	0.6B	0.79B	1.6B	—	0.82B	—	2.2s	0.74B	—	—
silver	—	—	—	—	—	—	1.9BNU	1BNU	—	—
sodium	264B	3,130	437B	78.3B	268B	81.3B	890B	391B	175B	111B
vanadium	2.1B	24.6	7.9B	1.5B	—	4.6B	5.2B	3.9B	13.7	11.5
zinc	6.5	47.1	349	42.2	189	80.5	761	60.2	84.2	182
cyanide	—	6.1	13.1	—	13	—	28.2	13.7	—	—

— Not detected.

COMPOUND QUALIFIERS	DEFINITION	INTERPRETATION
J	Indicates an estimated value.	Compound value may be semiquantitative.
x	Manual quantitation was performed.	Compound may or may not be present.

ANALYTE QUALIFIERS	DEFINITION	INTERPRETATION
s	Analysis by Method of Standard Additions.	Value is quantitative.
N	Spike recoveries outside QC protocols, which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be quantitative or semiquantitative.
B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semiquantitative.
J	Value is above CRDL and is an estimated value because of a QC protocol.	Value may be semiquantitative.
W	Post-digestion spike for furnace AA analysis is out of control limits (35 - 115%), while sample absorbance is < 50% of spike absorbance.	Value may be semiquantitative.

Table 4-2
RESULTS OF CHEMICAL ANALYSIS OF
FIT-COLLECTED RESIDENTIAL WELL SAMPLES
FOR THE EL SITE SSI

Sample Collection Information and Parameters	RW1	Duplicate	RW2	RW3	Blank
Date	05/15/91	05/15/91	05/15/91	05/15/91	05/15/91
Time	1345	1345	1645	1725	1110
CLP Organic Traffic Report Number	EHZ36	EHZ37	EHZ39	EHZ40	EHZ38
CLP Inorganic Traffic Report Number	MEHN16	MEHN17	MEHN19	MEHN20	MEHN18
Temperature (°C)	21	21	21	22	26
Specific Conductivity (umhos)	586	586	653	802	3.81
pH	10.32	10.32	7.83	8.28	7.54
Compound Detected (values in ug/L)					
Volatile Organics					
trans-1,2-dichloroethene	—	0.1J	—	—	—
chloroform	62.5E	60.8E	—	—	0.6J
carbon tetrachloride	0.4J	0.4J	—	—	—
bromodichloromethane	17.9	17.6	—	—	—
dibromochloromethane	2.6	2.7	—	—	—
benzene	0.1J	—	—	—	—
toluene	—	—	—	—	0.1J
ethylbenzene	—	—	—	—	0.1J
xylenes (total)	—	—	—	—	0.2J
Pesticides/PCBs+					
Analyte Detected (values in ug/L)					
aluminum	240	211	98.6B	90.1B	—
barium	81	79.9	182	272	—
cadmium	0.3BsJ	0.24BsJ	0.15BsJ	0.18BsJ	0.13BsJ
calcium	82,800	81,100	97,300	111,000	—
copper	265	251	—	—	—
iron	—	—	1,710	6,280	—
magnesium	30,400	29,900	29,200	33,500	—
manganese	—	—	62.3	100	—
potassium	2,580	2,550	2,690	3,580	—
selenium	2.6sJ	4sJ	2.9sJ	2.7sJ	2.3s
sodium	33,100	32,100	45,100	56,000	136BJ
zinc	12.1B	—	—	197	—

— Not detected.

+ The pesticide/PCB fractions of all residential well samples were qualified R (unusable) because of laboratory problems.

Table 4-2 (Cont.)

COMPOUND QUALIFIERS	DEFINITION	INTERPRETATION
J	Indicates an estimated value.	Compound value may be semiquantitative.
E	This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods.	Compound value may be semiquantitative. There should be another analysis with a D qualifier, which is to be used.
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

ANALYTE QUALIFIERS	DEFINITION	INTERPRETATION
S	Analysis by Method of Standard Additions.	Value is quantitative.
B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
J	Value is above CRDL and is an estimated value because of a QC protocol.	Value may be semiquantitative.

5. DISCUSSION OF MIGRATION PATHWAYS

5.1 INTRODUCTION

This section presents discussions of data and information pertaining to potential migration pathways and targets of TCL compounds and TAL analytes that are possibly attributable to the BL site.

The five migration pathways of concern discussed are groundwater, surface water, air, fire and explosion, and direct contact.

5.2 GROUNDWATER

The TCL compounds and TAL analyte detected above levels detected in upgradient residential well samples RW2 and RW3 are chloroform (62.5E ug/L in sample RW1), bromodichloromethane (17.9 ug/l in sample RW1), and copper (265 ug/L in sample RW1)(see Table 4-2 for interpretations and definitions of qualifiers).

The TCL compounds acetone (180 ug/kg in sample S1), 2,4-dimethylphenol (4,100 ug/kg in sample S2), 2-methylnaphthalene (7,500 ug/kg in sample S2), 2-methylphenol (8,900 ug/kg in sample S2), and naphthalene (5,100 ug/kg in sample S2) were detected at concentrations above background levels in on-site soil and sludge samples. The TAL analytes cyanide (28.2 mg/kg in sample S7), lead (346NJ mg/kg in sample S7), chromium (84.1 mg/kg in sample S7), cadmium (4.4 mg/kg in sample S7), and beryllium (3.7 mg/kg in sample S7) were detected at concentrations above background levels in on-site soil and sludge samples (see Table 4-1 for definitions and interpretations of qualifiers).

The TCL compounds and TAL analytes detected in the groundwater samples are not attributable to the BL site because the same TCL compounds and TAL analytes were not detected in the groundwater samples and in the soil and sludge samples collected on-site. However, a potential does exist for TCL compounds and TAL analytes to migrate from on-site soil to groundwater based on the following information.

- o TCL compounds and TAL analytes were detected in the on-site soil, sludge, and sediment samples.
- o There are no leachate collection systems or engineered liners in the landfill area or the areas where wastewater sludge, foundry sand, and other debris were disposed of (ISBH 1973).
- o Wastewater sludge (containing cadmium and lead), foundry sand, and calcium carbonate have been deposited on-site (ISBH 1985b).
- o In the past, many TCL compounds and TAL analytes were detected in on-site samples (ISBH 1985b).
- o Sludge was disposed of in a liquid state.

The geology of the area of the BL site also effects the potential for TCL compounds and TAL analytes to migrate from the site to groundwater in the area. The site area is within an outwash valley train deposit formed by meltwater flow in a preglacial channel in Marion County (Indiana Department of Natural Resources [IDNR] 1963). Highly permeable quaternary deposits of sand, silt, and clay are underlain by outwash deposits of sand and gravel (U.S. Department of Agriculture [USDA] 1978). Devonian-age shale and limestone comprise the upper bedrock layers in this area and underlie the outwash deposits. The depth to bedrock is approximately 105 feet (see Appendix E for well logs of the area of the site).

Based on residential well logs of the area of the site, the site area topsoil consists of sand, silt, and clay and ranges in depth from 0 to 9 feet. The topsoil overlies a highly permeable unconsolidated outwash deposit of sand and gravel that ranges in thickness from 0 to 100 feet.

In the outwash deposits, an impermable thin layer of clay is present. According to area well logs, the thickness of the clay layer ranges from 5 to 30 feet and depth ranges from 10 to 60 feet.

Depth to groundwater is approximately 20 feet (IDNR 1983). The aquifer of concern (AOC) is considered to be the outwash deposits of sand and gravel and the bedrock. The depth to the AOC is also 20 feet. Based on a groundwater investigation in the area, the direction of local groundwater flow is southeast toward Eagle Creek. Some on-site groundwater may flow toward Blue Lake, especially in areas directly around the lake (Rivers 1991).

Residential, industrial, and city of Indianapolis water supply wells are drilled into the outwash deposits. According to area well logs, private wells within 3 miles of the site are approximately 100 feet deep. The municipal wells of the Indianapolis Water Company and the City of Speedway Water Works are located more than 3 miles from the site (Burns 1991). Therefore, the population within a 3-mile radius of the site that is served by the Indianapolis Water Company and the City of Speedway Water Works is not a potential target of the migration of TCL compounds and TAL analytes from the site to groundwater.

The population within a 3-mile radius of the site potentially affected by the migration of TCL compounds and TAL analytes from the site to groundwater is approximately 5,678 persons. This population was calculated by counting the number of houses that are not served by the two municipal well systems within a 3-mile radius of the site on United States Geological Survey (USGS) topographic maps (USGS 1967, 1967a, 1967b, 1967c) and multiplying this number by a persons-per-household value of 2.51 for Marion County, Indiana (U.S. Bureau of the Census 1982).

5.3 SURFACE WATER

No surface water samples were collected during the SSI of the BL site. However, the TCL compounds acetone (52 ug/kg in sample S3) and the TAL analyte cyanide (13.7 mg/kg in sample S8) were detected at concentrations above background levels in the FIT-collected surface sediment samples. These samples were obtained from potential migration pathways to Blue Lake. In the past, cyanide has been detected in the

waste stream samples from Chrysler and in the on-site samples (ISBH 1985b; White 1988).

Blue Lake was used for swimming and fishing until 1989, although residents living on the southern side of the lake continued to fish and swim in the lake until 1990 (Hurt 1991; Wooten 1990). FIT observed a surface water runoff pathway from the sludge, foundry sand, and calcium carbonate disposal areas into the lake.

The topography of the site does not indicate surface water runoff from the site to Eagle Creek, which forms the northeastern border of the site. FIT observed a levee along the west side of Eagle Creek, preventing the migration of TCL compounds and TAL analytes from the site to the creek via surface water runoff.

Eagle Creek flows into the White River approximately 1.5 miles downstream from the site. There are no downstream water intakes within 3-miles of the site in Eagle Creek or the White River, but both are used for fishing and recreational purposes (Burns 1991).

5.4 AIR

A release of TCL compounds or TAL analytes to the air was not documented during the SSI of the BL site. During the reconnaissance inspection, FIT site-entry instruments (flame ionization detector, explosimeter, and colorimeteric monitoring tubes for detecting hydrogen cyanide) did not detect levels that deviated from background concentrations at the site. In accordance with the U.S. EPA-approved work plan, further air monitoring was not conducted by FIT.

A potential does exist for TCL compounds and TAL analytes to migrate from the site via windblown particulates, based on the following information.

- Foundry sand has been dumped and left uncovered at the site.
- The TCL compound acetone was detected in a sample collected from the foundry sand.
- The BL site is sparsely vegetated, and wastes are not properly covered with final cover.

- o BLI was cited by I-APCD for violating fugitive dust regulations, and for allegedly causing detrimental respiratory health effects on 150 persons living in the I-70 Mobile Home Park (I-APCD 1987; Hurt 1991).

The population within a 4-mile radius of the site potentially affected by a release of TCL compounds and TAL analytes to the air is approximately 133,610 persons. This population was calculated by counting the number of houses within a 4-mile radius of the site on USGS topographic maps (USGS 1967, 1967a, 1967b, 1967c) and multiplying this number by persons-per-household value of 2.51 for Marion County, Indiana (U.S. Bureau of the Census 1982).

5.5 FIRE AND EXPLOSION

According to federal, state, and local file information reviewed by FIT and an interview with Kenneth Huber, Deputy Fire Marshal, Indianapolis Fire Prevention Bureau, no documentation exists of an incident of fire or explosion at the site (Huber 1990). According to FIT observations and site-entry equipment readings, no potential for fire or explosion existed at the site at the time of the SSI.

5.6 DIRECT CONTACT

According to federal, state, and local file information reviewed by FIT, observations made during the SSI, and the interview with the site representative, no incidents of direct contact with TCL compounds and TAL analytes at the BL site have been documented.

A potential does exist for persons living in the area to come into direct contact with TCL compounds and TAL analytes at the site because the site is only partially fenced and is not guarded. Persons living in this area also use Blue Lake for swimming and fishing purposes (Wooten 1990).

Gladys Troxel is the manager of the I-70 Mobile Home Park and controls access to the site for BLI. Troxel is the only person who works at the site.

The population within a 1-mile radius of the site potentially affected through direct contact with TCL compounds and TAL analytes at the site, is 6,672 persons. This population was calculated by counting the number of houses within a 1-mile radius of the site on USGS

topographic maps (USGS 1967, 1967a, 1967b, 1967c) and multiplying this number by a persons-per-household value of 2.51 for Marion County, Indiana (U.S. Bureau of the Census 1982).

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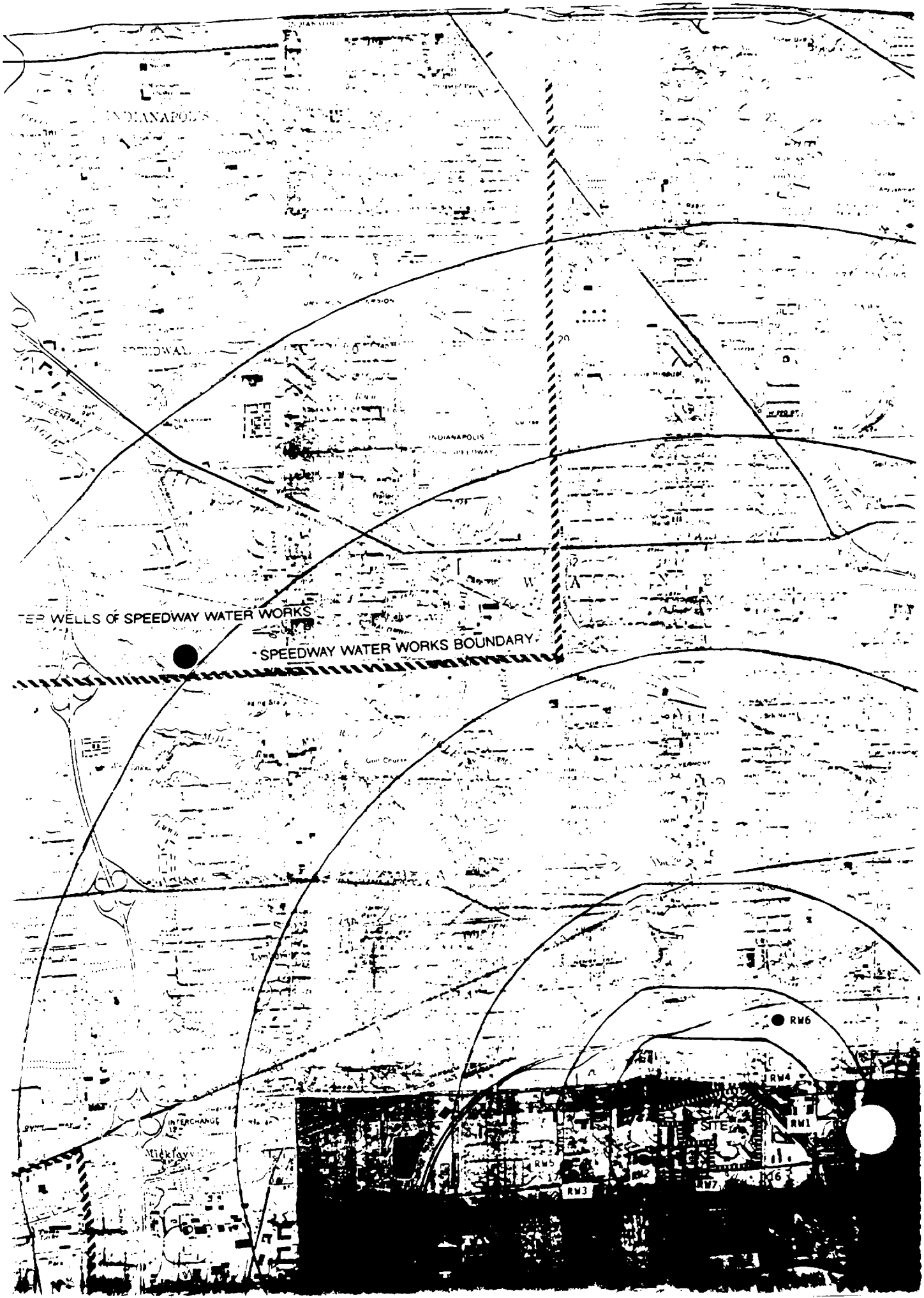
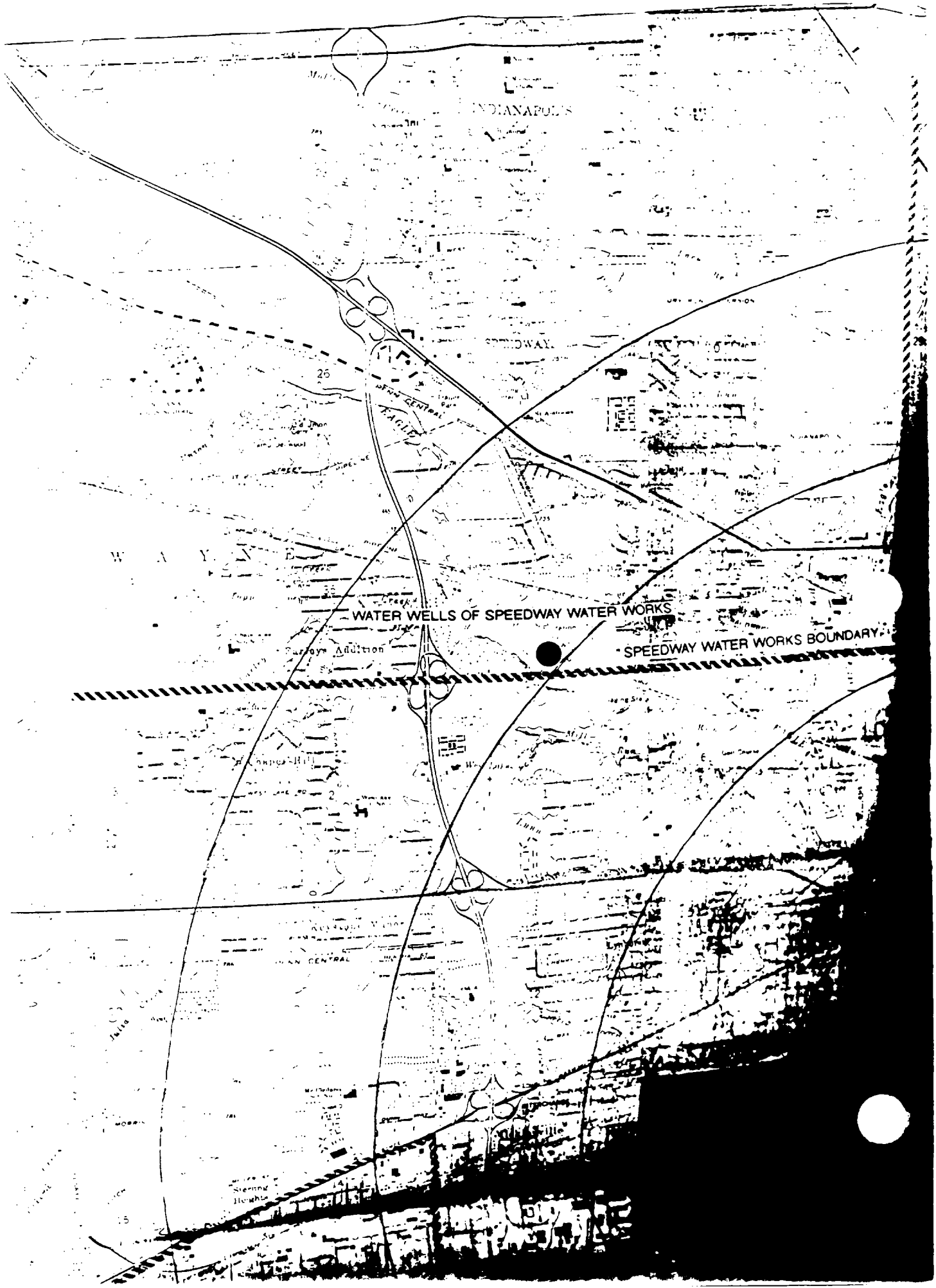
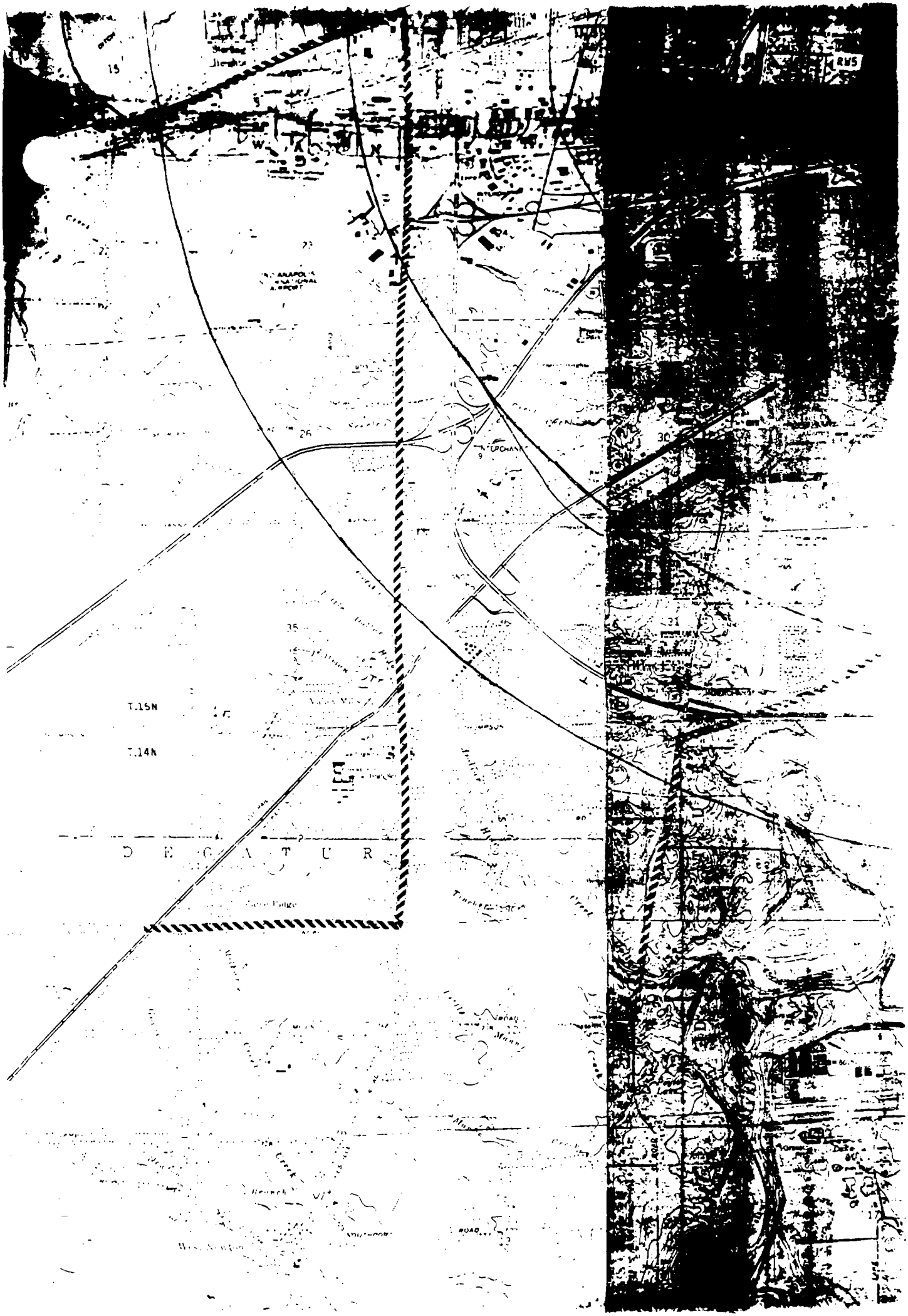
APPENDIX A

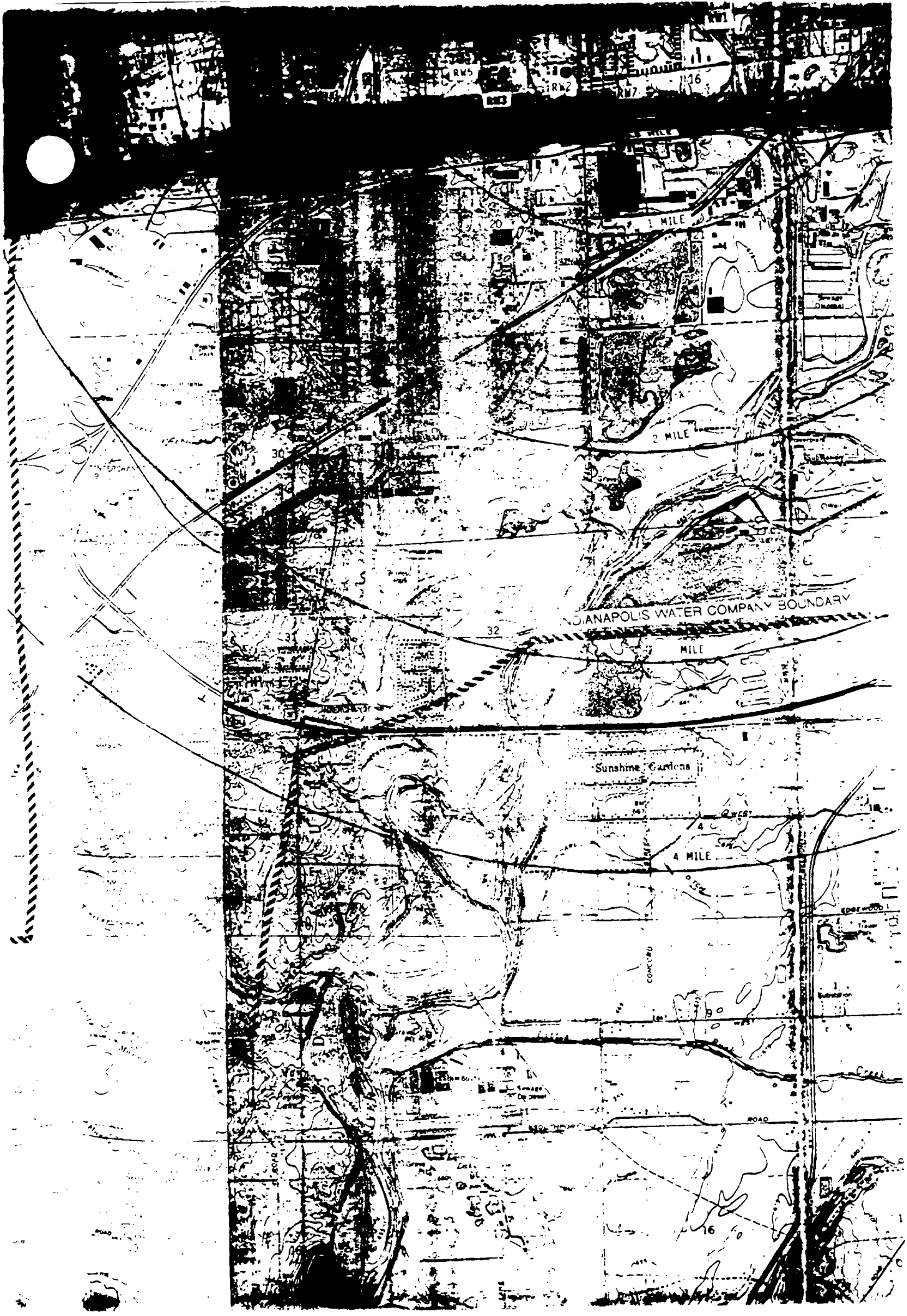
SITE 4-MILE RADIUS MAP

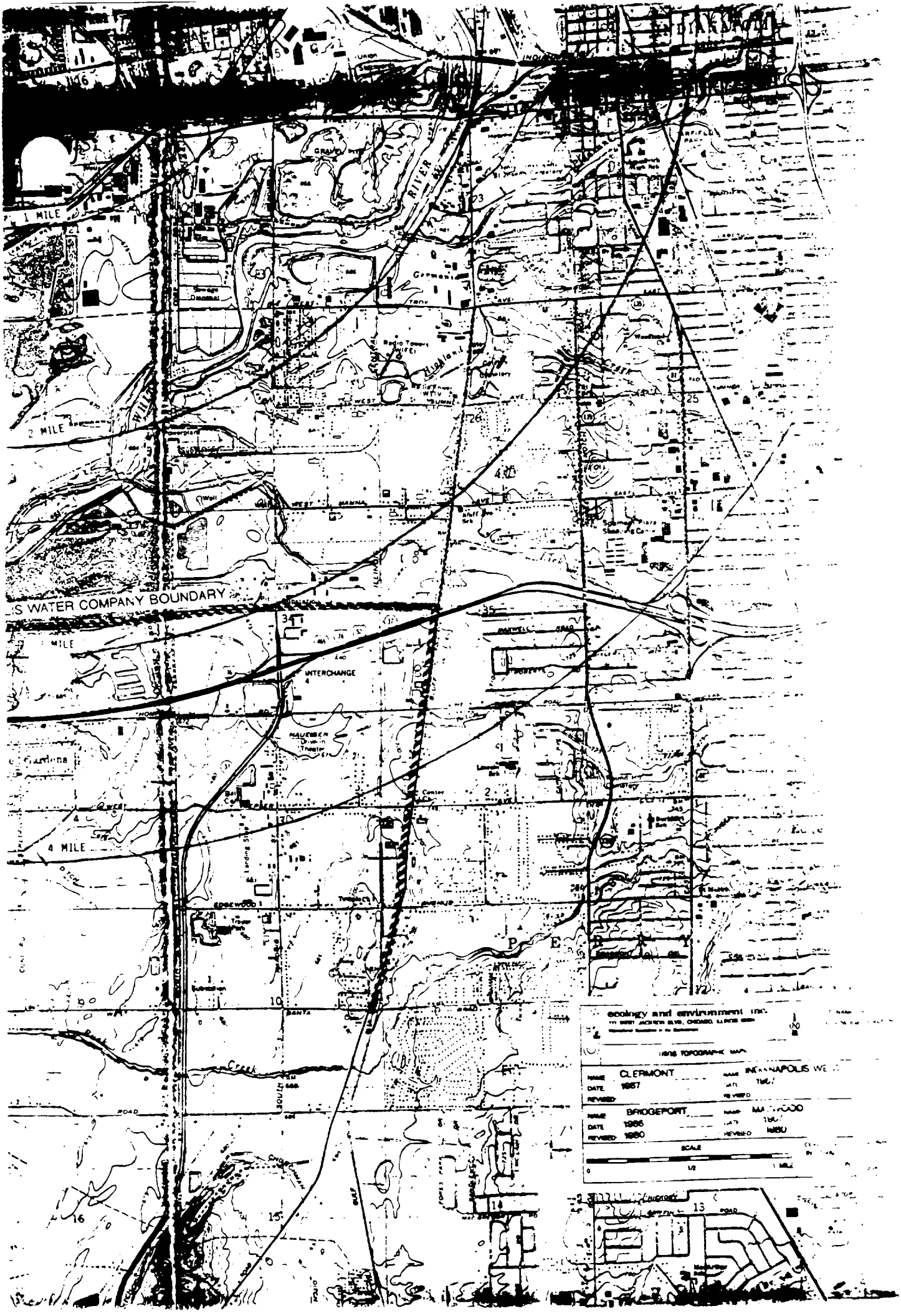
SOURCE FOR INDIANAPOLIS WATER COMPANY


INDIANAPOLIS
SPEEDWAY
INDIANAPOLIS
TER WELLS OF SPEEDWAY WATER WORKS
SPEEDWAY WATER WORKS BOUNDARY
RW6
RW4
RW1
SITE
RW5
RW3
RW2
RW7
RW6


WATER WELLS OF SPEEDWAY WATER WORKS
SPEEDWAY WATER WORKS BOUNDARY


T.15N
T.14N
D E C A T U R


1 MILE
2 MILE
4 MILE
MILE
ANAPOLIS WATER COMPANY BOUNDARY
Sunshine Gardens
EDGEWOOD
ROAD


ecology and environment inc.
CLERMONT
DATE 1957
BRIDGEPORT
DATE 1986
REVISED 1990
SCALE
1 MILE
2 MILE
4 MILE
INTERCHANGE
WATER COMPANY BOUNDARY

B

APPENDIX B

U.S. EPA FORM 2070-13

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IND	C46107157

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
BLUE LAKE INC	3023 W. MORRIS ST

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
INDIANAPOLIS	IN	46241	MARION	97	02

09 COORDINATES LATITUDE	LONGITUDE
86 12 30.N	39 45 20.W

10 TYPE OF OWNERSHIP (Check one)
■ A. PRIVATE ☐ B. FEDERAL _____ ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER _____ ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
05, 15, 91 (MONTH DAY YEAR)	■ ACTIVE ☐ INACTIVE	1927 (BEGINNING YEAR) / Present (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ■ B. EPA CONTRACTOR C.C. JOHNSON & MALHOTRA (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) ☐ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
TANVEER ANJUM	CIVIL ENGINEER	CCJM	(312) 621-3944
09 OTHER INSPECTORS	**10 TITLE**	**11 ORGANIZATION**	**12 TELEPHONE NO.**
MIKE DUET	ENVIRONMENTAL SCIENTIST	CCJM	(312) 621-3944
CYNTHIA SCHULTZ	ENVIRONMENAL HEALTH SPECIALIST	ECOLOGY & ENVIRONMENT	(317) 663-9415
PARIMAL MEHTA	ENVIRONMENTAL ENGINEER	CCJM	(312) 621-3944
ANTOSH SHARMA	CIVIL ENGINEER	CCJM	(312) 621-3944
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
JACK D. HURT	OWNER	RR1 Box 122, MARATHON, FL	(305) 289-1333
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
■ PERMISSION ☐ WARRANT	8:35	SUNNY ≈ 75°F

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
HARRY E. ATKINSON	IDEM	(317) 233-8927

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
PARIMAL MEHTA	U.S. EPA	C.C. JOHNSON & MALHOTRA	(312) 621-3944	06, 03, 91 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IND	046107157

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- [x] A. SOLID
- [ ] B. POWDER, FINES
- [x] C. SLUDGE
- [ ] D. OTHER (Specify)
- [ ] E. SLURRY
- [x] F. LIQUID
- [ ] G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS: UNKNOWN
CUBIC YARDS:
NO. OF DRUMS:

03 WASTE CHARACTERISTICS (Check all that apply)

- [x] A. TOXIC
- [ ] B. CORROSIVE
- [ ] C. RADIOACTIVE
- [x] D. PERSISTENT
- [ ] E. SOLUBLE
- [ ] F. INFECTIOUS
- [ ] G. FLAMMABLE
- [ ] H. IGNITABLE
- [ ] I. HIGHLY VOLATILE
- [ ] J. EXPLOSIVE
- [ ] K. REACTIVE
- [ ] L. INCOMPATIBLE
- [ ] M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE	UNKNOWN	UNKNOWN	
OLW	OILY WASTE			
SOL	SOLVENTS			WASTE TYPES ARE FROM
PSD	PESTICIDES			RESULTS OF FIT-COLLECTED
OCC	OTHER ORGANIC CHEMICALS	UNKNOWN	UNKNOWN	SOIL, SLUDGE, AND SEDIMENT
IOC	INORGANIC CHEMICALS			SAMPLES.
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	UNKNOWN	UNKNOWN	

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
	SEE TABLE 4-1		IN NARRATIVE.		

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS	NONE		FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sampling results)

C.C. JOHNSON & MALHOTRA, FIT, SITE INSPECTION 5/15/91
IDEM FILE INFORMATION
U.S. EPA PRELIMINARY ASSESSMENT.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: IND | 02 SITE NUMBER: 046107157

HAZARDOUS CONDITIONS AND INCIDENTS

A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 5,674
02 ☐ OBSERVED (DATE: ____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

SEE SECTION 5-2 IN NARRATIVE.

01 ■ B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 0
02 ■ OBSERVED (DATE: 5/16/91) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

SEE SECTION 5-3 IN NARRATIVE.

01 ■ C. CONTAMINATION OF AIR
03 POPULATION POTENTIALLY AFFECTED: 133,610
02 ☐ OBSERVED (DATE: ____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

SEE SECTION 5-3 IN NARRATIVE.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: ____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

SEE SECTION 5-5 IN NARRATIVE

01 ■ E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: 6,672
02 ☐ OBSERVED (DATE: ____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

SEE SECTION 5-6 IN NARRATIVE.

01 ■ F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: Appx. 80 (Acres)
02 ■ OBSERVED (DATE: 5/16/91) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

SEE SECTIONS 4 & 5 IN NARRATIVE

01 ■ G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 5,674
02 ☐ OBSERVED (DATE: ____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

SEE SECTION 5-2 OF NARRATIVE.

01 ■ H. WORKER EXPOSURE/INJURY
03 WORKERS POTENTIALLY AFFECTED: 1
02 ☐ OBSERVED (DATE: ____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

SEE SECTION 5-6 IN NARRATIVE

01 ■ I. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: 133,610
02 ☐ OBSERVED (DATE: ____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

SEE SECTION 5 IN NARRATIVE

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: IND | 02 SITE NUMBER: 046107157

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ■ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
AN AREA OF NO VEGETATION WAS OBSERVED ON THE WESTERN SIDE OF BLUE LAKE. A POTENTIAL EXISTS FOR DAMAGE TO FLORA DUE TO TYPE OF WASTE DISPOSED OF ON-SITE.

01 ■ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include names of species)
DRAINAGE IS OBSERVED IN TO BLUE LAKE FROM LANDFILL A POTENTIAL EXISTS FOR DAMAGE TO FAUNA DUE TO TYPE OF WASTE DISPOSED NEAR BLUE LAKE.

01 ■ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ■ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
TCL COMPOUNDS AND TAL ANALYTES WERE DETECTED IN SOIL, SLUDGE, AND SEDIMENT SAMPLES ON-SITE. BLUE LAKE WAS USED FOR FISHING AND SWIMMING. A POTENTIAL DOES EXIST FOR CONTAMINATION OF FOOD CHAIN.

01 ■ M. UNSTABLE CONTAINMENT OF WASTES (Spills/Runoff/Standing liquids, Leaking drums) — 02 ■ OBSERVED (DATE: 5/15/91) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 133,610
04 NARRATIVE DESCRIPTION
SEE SECTION 2, 4 & 5 IN NARRATIVE.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
NONE DOCUMENTED. ANT NONE OBSERVED

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
NONE DOCUMENTED AND NONE OBSERVED

01 ■ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ■ OBSERVED (DATE: 2/15/85) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
ILLEGAL SLUDGE DISPOSAL WAS DOCUMENTED AT THE SITE. NOTICE OF VIOLATION WAS ISSUED BY IDEM ON AUG. 7/'85. - SEE SEC. 2-3 IN NARRATIVE

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
NONE

III. TOTAL POPULATION POTENTIALLY AFFECTED: 133,610

IV. COMMENTS
SEE SECTION 2, 3 and 5.

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)
U.S.G.S. TOPOGRAPHIC MAPS
IDEM FILE INFORMATION
CCJM, FIT, SITE INSPECTION 5/15/91

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IND	046107157

II. PERMIT INFORMATION

TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
■ G. STATE (Specify)	UNKNOWN	8/22/73	UNKNOWN	SOLID WASTE LANDFILL PERMIT
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
■ C. DRUMS, ABOVE GROUND	UNKNOWN	UNKNOWN
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
■ F. LANDFILL	UNKNOWN	UNKNOWN
☐ G. LANDFARM		
■ H. OPEN DUMP	UNKNOWN	UNKNOWN
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)	05 OTHER
☐ A. INCINERATION	■ A. BUILDINGS ON SITE
☐ B. UNDERGROUND INJECTION	3 residences
☐ C. CHEMICAL/PHYSICAL	
☐ D. BIOLOGICAL	
☐ E. WASTE OIL PROCESSING	06 AREA OF SITE
☐ F. SOLVENT RECOVERY	Appr. 6 (Acres)
☐ G. OTHER RECYCLING/RECOVERY	
■ H. OTHER NONE. (Specify)	

07 COMMENTS

SEE SECTION 2-3 IN NARRATIVE.

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE ■ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

THE LANDFILL DOES NOT HAVE A LINER OR A LEACHATE COLLECTION SYSTEM.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ■ YES ☐ NO

02 COMMENTS

THE SITE AREA IS NOT ENTIRELY FENCED.

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

C.C.J.M, FIT, SITE INSPECTION 5/15/91

IDEM, FILE INFORMATION

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: IN | 02 SITE NUMBER: D0461071577

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)	SURFACE	WELL	02 STATUS: ENDANGERED	AFFECTED	MONITORED	03 DISTANCE TO SITE
COMMUNITY	A. ■	B. ■	A. ☐	B. ☐	C. ■	A. > 3 (mi)
NON-COMMUNITY	C. ☐	D. ■	D. ☐	E. ☐	F. ☐ UNKNOWN	B. < 0.01 (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☐ A. ONLY SOURCE FOR DRINKING ■ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER: 5,678

03 DISTANCE TO NEAREST DRINKING WATER WELL: < 0.01 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
20 (ft)	SOUTHEAST - TOWARDS EAGLE CREEK	20 (ft)	50 - 150 (gpd)	☐ YES ■ NO

09 DESCRIPTION OF WELLS (Including usage, depth, and location relative to population and buildings)

SEE SECTION 5.2 IN NARRATIVE

10 RECHARGE AREA		11 DISCHARGE AREA	
■ YES ☐ NO	COMMENTS: MOST OF SITE AREA IS POTENTIALLY A RECHARGE AREA	■ YES ☐ NO	COMMENTS: BLUE LAKE IS PROBABLY A DISCHARGE AREA

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☐ A. RESERVOIR (RECREATION) DRINKING WATER SOURCE ☐ B. IRRIGATION ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME	AFFECTED	DISTANCE TO SITE
BLUE LAKE	■	ON-SITE (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 6,672 NO. OF PERSONS	B. 32,282 NO. OF PERSONS	C. 76,889 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION: < 0.01 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE	04 DISTANCE TO NEAREST OFF-SITE BUILDING
10,742	< 0.01 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, dense population, urban area)

SEE SECTION 3.3 IN NARRATIVE

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IN	046107157

ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ■ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☐ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ■ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
APP 70 to 100 (ft)	UNKNOWN (ft)	UNKNOWN	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE		
		SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
+ 7 (in)	2.6 (in)	10 - 15 %	East	5 - 8 %

09 FLOOD POTENTIAL	10
SITE IS IN N/A YEAR FLOODPLAIN	☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY N/A

11 DISTANCE TO WETLANDS (5 acre minimum)		12 DISTANCE TO CRITICAL HABITAT (of endangered species)
ESTUARINE	OTHER	> 3 (mi)
A. N/A (mi)	B. > 3 (mi)	ENDANGERED SPECIES: UNKNOWN

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS	
		PRIME AG LAND	AG LAND
A. < 0.01 (mi)	B. < 0.01 (mi)	C. UNKNOWN (mi)	D. > 4 MILES (mi)

DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

SEE APPENDIX A.

VII. SOURCES OF INFORMATION (Cite specific references e.g., state files, sample analysis, reports)

U.S.G.S. TOPOGRAPHIC MAP
RAINFALL FREQUENCY MAP.
SOIL SURVEY OF MARION COUNTY

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IN	046107151

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	3	INORGANIC TO ETS ANALYTICAL SVCS ORGANIC TO SS	NOW AVAILABLE
SURFACE WATER	NA		
WASTE	NA		
AIR	NA		
RUNOFF	NA		
SPILL	NA		
SOIL	10	ORGANICS HALLET INORGANICS TO BETZ LABS	NOW AVAILABLE
VEGETATION	NA		
OTHER	NA		

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
RADIATION MONITOR	NO DEVIATION FROM BACKGROUND LEVEL
OXYGEN METER	
EXPLOSIMETER	
A-12S	
HCN DETECTION TUBE	NO COLOR CHANGE

IV. PHOTOGRAPHS AND MAPS

01 TYPE ● GROUND ☐ AERIAL — 02 IN CUSTODY OF ECOLOGY & ENVIRONMENT, CHICAGO, IL (Name of organization or individual)

03 MAPS ● YES ☐ NO — 04 LOCATION OF MAPS ECOLOGY & ENVIRONMENT INC., CHICAGO, IL

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

SEE TABLE 4-2 FOR pH, CONDUCTIVITY AND TEMPERATURE DATA OF GROUNDWATER SAMPLES.

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

CCJM, FIT SITE INSPECTION 5/15/91.

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION
01 STATE: IN | 02 SITE NUMBER: D046107157

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
BLUE LAKE, INC.	UNKNOWN	3023 W. MORRIS ST.	UNK.	INDIANAPOLIS	IN	46241
JACK HURT % BLUE LAKE, INC		RR 1 BOX 122		MARATHON	FL	33050

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE	12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
INDIANA INDUSTRIAL DEVELOPMENT BOARD	UNK.	UNKNOWN	UNK.	INDIANAPOLIS	IN	UNK
MR. JAMES HURT	UNK.	UNKNOWN	UNK	INDIANAPOLIS	IN	UNK

IV. REALTY OWNER(S) (If applicable, list most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

IDEM FILE INFORMATION

CCJM, FIT SSI 5/15/91

EPA FORM 2070-13 (7-81)

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

EPA

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IN	D046167157

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
14 CITY	15 STATE / 16 ZIP CODE

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD
01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD
01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME	11 D+B NUMBER
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
14 CITY	15 STATE / 16 ZIP CODE
10 NAME	11 D+B NUMBER
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
14 CITY	15 STATE / 16 ZIP CODE
10 NAME	11 D+B NUMBER
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
14 CITY	15 STATE / 16 ZIP CODE

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IND	046107157

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
NONE	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
CHRYSLER CORPORATION, INDIANAPOLIS FOUNDRY	UNK.		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
1100 S. TIBBS AVE.	UNK.		
05 CITY / 06 STATE / 07 ZIP CODE		05 CITY / 06 STATE / 07 ZIP CODE	
INDIANAPOLIS / IN / 46241			
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
OIL EQUIPMENT SUPPLY CORPORATION	UNK.		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
3901 W. 80th ST.			
05 CITY / 06 STATE / 07 ZIP CODE		05 CITY / 06 STATE / 07 ZIP CODE	
INDIANAPOLIS / IN / 46268			

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
KENNETH SMOCK ASSOCIATES, INC.	UNK		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
2910 W. MINNESOTA ST.	UNK.		
05 CITY / 06 STATE / 07 ZIP CODE		05 CITY / 06 STATE / 07 ZIP CODE	
INDIANAPOLIS / IN / 46241			
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY / 06 STATE / 07 ZIP CODE		05 CITY / 06 STATE / 07 ZIP CODE	

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

IDEM FILE INFORMATION
CCJM FIT, SSI Dt. 5/15/91.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IN	046107157

ST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ H. ON SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ N. CUTOFF WALLS — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IN	046107157

AST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ● 1. ACCESS TO SITE RESTRICTED — 02 DATE UNKNOWN — 03 AGENCY MARION COUNTY HEALTH DEPT
04 DESCRIPTION
POSTED SIGNS AT LAKE STATING "NO SWIMMING, NO FISHING, NO WADING" SEE SECTION 2-3

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NA

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

SEE SECTION 2-3.

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

IND. DEM, FILE INFORMATION
CCJM, FIT SITE INSPECTION 05/15/91.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IND	046107157

. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☒ YES ☐ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

SEE SECTION 2-3 OF NARRATIVE.

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

IDEM FILE INFORMATION

EPA FORM 2070-13 (7-81)

C

SITE NAME: BLUE LAKE INC PAGE 1 OF

U.S. EPA ID: IND046107157 TDD: F05-9009-007 PAN: FIN0697SB

DATE: 5/15/91

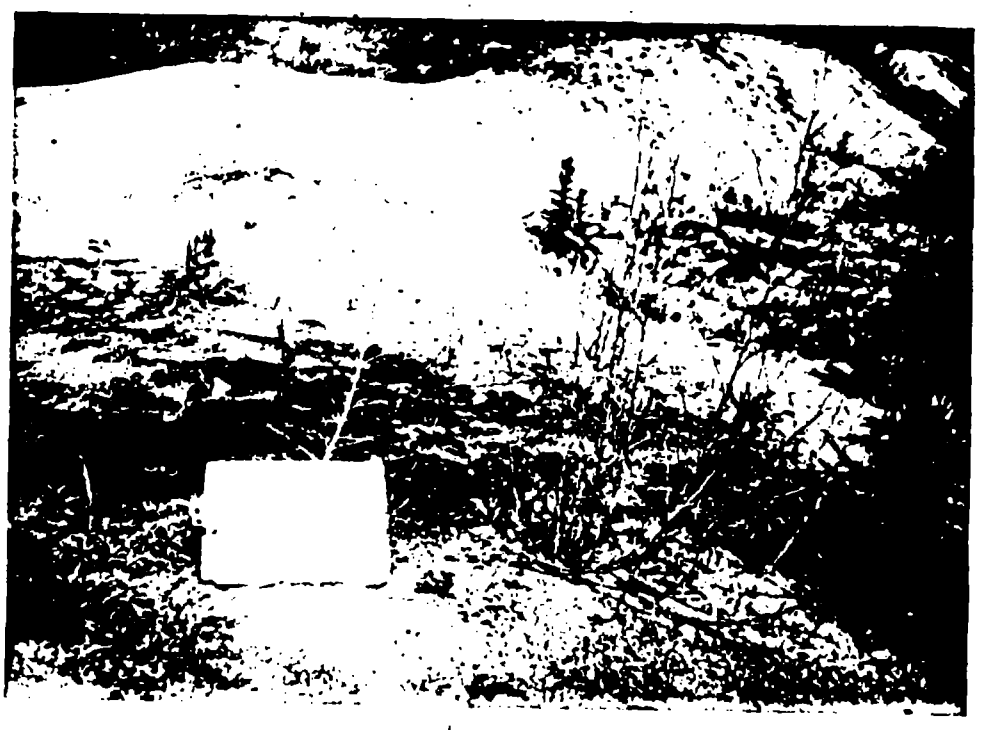
TIME: 11:20

DIRECTION OF PHOTOGRAPH: North

WEATHER CONDITIONS: SUNNY ≈75°F

PHOTOGRAPHED BY: TANVEER ANJUM

SAMPLE ID (if applicable): S1



DESCRIPTION: Close up view of sampling location S1

DATE: 05/15/91

TIME: 11:20

DIRECTION OF PHOTOGRAPH: North east

WEATHER CONDITIONS: SUNNY ≈75°F

PHOTOGRAPHED BY: TANVEER ANJUM

SAMPLE ID (if applicable): S1

DESCRIPTION: Perspective view of foundary sand piles and sampling location S1

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: BLUE LAKE INC PAGE OF

U.S. EPA ID: IND046107157 TDD: F05-7009-007 PAN: FINC0033

DATE: 5/15/91

TIME: 11:35

DIRECTION OF PHOTOGRAPH: South west

WEATHER CONDITIONS: SUNNY ≈75°F

PHOTOGRAPHED BY: TANVEER ANJUM

SAMPLE ID (if applicable): S2

DESCRIPTION: Sludge Impoundment - close up view of S2

DATE: 05/15/91

TIME: 11.35

DIRECTION OF PHOTOGRAPH: Southeast

WEATHER CONDITIONS: SUNNY ≈ 75 F

PHOTOGRAPHED BY: TANVEER ANJUM

SAMPLE ID (if applicable): S2

DESCRIPTION: Perspective view of Sampling Location S2 Back side lake is visible

SITE NAME: BLUE LAKE INC PAGE OF

U.S. EPA ID: IND046107157 TDD: F05-9009-007 PAN: FIN0697SB

DATE: 5/15/91

TIME: 12:25

DIRECTION OF PHOTOGRAPH: East

WEATHER CONDITIONS: SUNNY ≈75° F

PHOTOGRAPHED BY: TANVEER ANJUM

SAMPLE ID (if applicable): S3

DESCRIPTION: Close up view of sampling location S3

DATE: 05/15/91

TIME: 12:25

DIRECTION OF PHOTOGRAPH: Northeast

WEATHER CONDITIONS: SUNNY ≈ 75° F

PHOTOGRAPHED BY: TANVEER ANJUM

SAMPLE ID (if applicable): S3

DESCRIPTION: Perspective view of sampling location S3
Northwest corner of lake is visible

SITE NAME: BLUE LAKE INC PAGE OF

U.S. EPA ID: IND046107157 TDD: F05-9009-007 PAN: FINC697SB

DATE: 5/15/91

TIME: 12:50

DIRECTION OF PHOTOGRAPH: North west

WEATHER CONDITIONS: SUNNY ≈75° F

PHOTOGRAPHED BY: TANVEER ANJUM

SAMPLE ID (if applicable): S4

DESCRIPTION: Close-up view of sampling location S4

DATE: 05/15/91

TIME: 12:50

DIRECTION OF PHOTOGRAPH: North east

WEATEER CONDITIONS: SUNNY ≈75° F

PHOTOGRAPHED BY: TANVEER ANJUM

SAMPLE ID (if applicable): S4

DESCRIPTION: Perspective view of sampling location

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: BLUE LAKE INC. PAGE 5 OF 16

U.S. EPA ID: IND 046167157 TDD: F05-9109-007 PAN: FINCE1750

DATE: 5/15/91

TIME: 14:15

DIRECTION OF PHOTOGRAPH: East

WEATHER CONDITIONS: Sunny ≈ 75 F

PHOTOGRAPHED BY: Tanveer Anjum

SAMPLE ID (if applicable): SS

DESCRIPTION: Close-Up of

SITE NAME: BLUE LAKE INC PAGE OF

U.S. EPA ID: IND046107157 TDD: F05-9009-C07 PAN: FIN0692SB

DATE: 5/15/91

TIME: 12:30

DIRECTION OF PHOTOGRAPH: South west

WEATHER CONDITIONS: SUNNY ≈75° F

PHOTOGRAPHED BY: TANVEER ANJUM

SAMPLE ID (if applicable): S6

DESCRIPTION: Close up view of sampling location S6

DATE: 05/15/91

TIME: 12:30

DIRECTION OF PHOTOGRAPH: Southwest

WEATHER CONDITIONS: SUNNY ≈ 75° F

PHOTOGRAPHED BY: TANVEER ANJUM

SAMPLE ID (if applicable): S6

DESCRIPTION: Perspective view of sampling location S6

SITE NAME: BLUE LAKE INC PAGE 3 OF

U.S. EPA ID: IND046107157 TDD: F05-9009-007 PAN: FINC697SB

DATE: 5/15/91

TIME: 14:40

DIRECTION OF PHOTOGRAPH: West

WEATHER CONDITIONS: SUNNY ≈75° F

PHOTOGRAPHED BY: TANVEER ANJUM

SAMPLE ID (if applicable): S7

DESCRIPTION: Close up view of sampling location S7

DATE: 05/15/91

TIME: 14:40

DIRECTION OF PHOTOGRAPH: North east

WEATHER CONDITIONS: SUNNY ≈ 75° F

PHOTOGRAPHED BY: TANVEER ANJUM

SAMPLE ID (if applicable):

DESCRIPTION: Perspective view of sampling location S7

SITE NAME: BLUE LAKE INC PAGE OF

U.S. EPA ID: IND046107157 TDD: F05-9009-007 PAN: FINC697SB

DATE: 5/15/91

TIME: 14:25

DIRECTION OF PHOTOGRAPH: West

WEATHER CONDITIONS: SUNNY ≈75° F

PHOTOGRAPHED BY: TANVEER ANJUM

SAMPLE ID (if applicable): S8

DESCRIPTION: Close up view of sampling location S8.

DATE: 05/15/91

TIME: 14:25

DIRECTION OF PHOTOGRAPH: West

WEATHER CONDITIONS: SUNNY ≈75° F

PHOTOGRAPHED BY: TANVEER ANJUM

SAMPLE ID (if applicable): S8

DESCRIPTION: Perspective view of sampling location S8 at eastern bank of Blue Lake

SITE NAME: BLUE LAKE INC PAGE 1 OF 1

U.S. EPA ID: IND046107157 TDD: F05-9009-007 PAN: FIN0697SB

DATE: 5/15/91

TIME: 14:00

DIRECTION OF PHOTOGRAPH:

WEATHER CONDITIONS: SUNNY ≈75° F

PHOTOGRAPHED BY: TANVEER ANJUM

SAMPLE ID (if applicable): SG

DESCRIPTION: Close-up view of sampling location SG

DATE: 05/15/91

TIME: 14:00

DIRECTION OF PHOTOGRAPH: West

WEATHER CONDITIONS: SUNNY ≈ 75° F

PHOTOGRAPHED BY: TANVEER ANJUM

SAMPLE ID (if applicable): SG

DESCRIPTION: Perspective view of sampling location SG at eastern bank of Blue Lake

SITE NAME: BLUE LAKE INC PAGE 1 OF

U.S. EPA ID: IND046107157 TDD: F05-9009-007 PAN: PINO69758

DATE: 5/15/91

TIME: 17:45

DIRECTION OF PHOTOGRAPH: South

WEATHER CONDITIONS: SUNNY ≈75° F

PHOTOGRAPHED BY: TANVEER ANJUM

SAMPLE ID (if applicable): S10

DESCRIPTION: Close-up view of sample location S10

DATE: 05/15/91

TIME: 17:45

DIRECTION OF PHOTOGRAPH: South west

WEATEER CONDITIONS: SUNNY ≈ 75° F

PHOTOGRAPHED BY: TANVEER ANJUM

SAMPLE ID (if applicable):

DESCRIPTION: Perspective view of off site sample location S10

SITE NAME: BLUE LAKE INC PAGE 1 OF 2

U.S. EPA ID: IND046107157 TDD: F05-9009-007 PAN: FINC697SB

DATE: 5/15/91

TIME: 15:50

DIRECTION OF PHOTOGRAPH: South

WEATHER CONDITIONS: SUNNY ≈75° F

PHOTOGRAPHED BY: TANVEER ANJUM

SAMPLE ID (if applicable): RW1

DESCRIPTION: Close up view of sampling location RW1

DATE: 05/15/91

TIME: 15:50

DIRECTION OF PHOTOGRAPH: East

WEATHER CONDITIONS: SUNNY ≈75° F

PHOTOGRAPHED BY: TANVEER ANJUM

SAMPLE ID (if applicable): RW1

DESCRIPTION: Perspective view of sampling location RW1

SITE NAME: BLUE LAKE INC PAGE 1 OF 11

U.S. EPA ID: IND046107157 TDD: F05-9009-007 PAN: FINC697SB

DATE: 5/15/91

TIME: 16:45

DIRECTION OF PHOTOGRAPH: North

WEATHER CONDITIONS: SUNNY ≈75° F

PHOTOGRAPHED BY: TANVEER ANJUM

SAMPLE ID (if applicable): RW2

DESCRIPTION: Sampling location RW2 - Perspective

DATE: 05/15/91

TIME: 17:25

DIRECTION OF PHOTOGRAPH:

WEATHER CONDITIONS: SUNNY ≈75° F

East

PHOTOGRAPHED BY: TANVEER ANJUM

SAMPLE ID (if applicable): RW3

DESCRIPTION: Sampling location RW3 - Close Up

SITE NAME: BLUE LAKE INC PAGE 1 OF

U.S. EPA ID: IND046107157 TDD: F05-9009-007 PAN: FIN0697SB

DATE: 5/15/91

TIME: 14:00

DIRECTION OF PHOTOGRAPH: East

WEATHER CONDITIONS: SUNNY ≈75° F

PHOTOGRAPHED BY: TANVEER ANJUM

SAMPLE ID (if applicable): N/A

DESCRIPTION: ____, ____ on the day of SSI, near the western boundary, Building debris was disposed

DATE: 05/15/91

TIME: 14:00

DIRECTION OF PHOTOGRAPH: North

WEATEER CONDITIONS: SUNNY ≈ 75° F

PHOTOGRAPHED BY: TANVEER ANJUM

SAMPLE ID (if applicable): N/A

DESCRIPTION: Dump area of building material debris

SITE NAME: BLUE LAKE INC PAGE 1 OF 2

U.S. EPA ID: IND046107157 TDD: F05-9009-007 PAN: FIN0697SB

DATE: 5/15/91

TIME: 17:55

DIRECTION OF PHOTOGRAPH: East

WEATHER CONDITIONS: SUNNY ≈75°F

PHOTOGRAPHED BY: TANVEER ANJUM

SAMPLE ID (if applicable): N/A

DESCRIPTION: Gate on Tibbs Ave. - Western boundary

DATE: 05/15/91

TIME: 16:10

DIRECTION OF PHOTOGRAPH: South

WEATEER CONDITIONS: SUNNY ≈75°F

PHOTOGRAPHED BY: TANVEER ANJUM

SAMPLE ID (if applicable): N/A

DESCRIPTION: I-70 Mobile Home Park Northern boundary of Blue Lake Inc. - Gate is visible on left corner

SITE NAME: BLUE LAKE INC PAGE 1 OF 1

U.S. EPA ID: IND046107157 TDD: F05-9009-007 PAN: FIN0697SB

DATE: 5/15/91

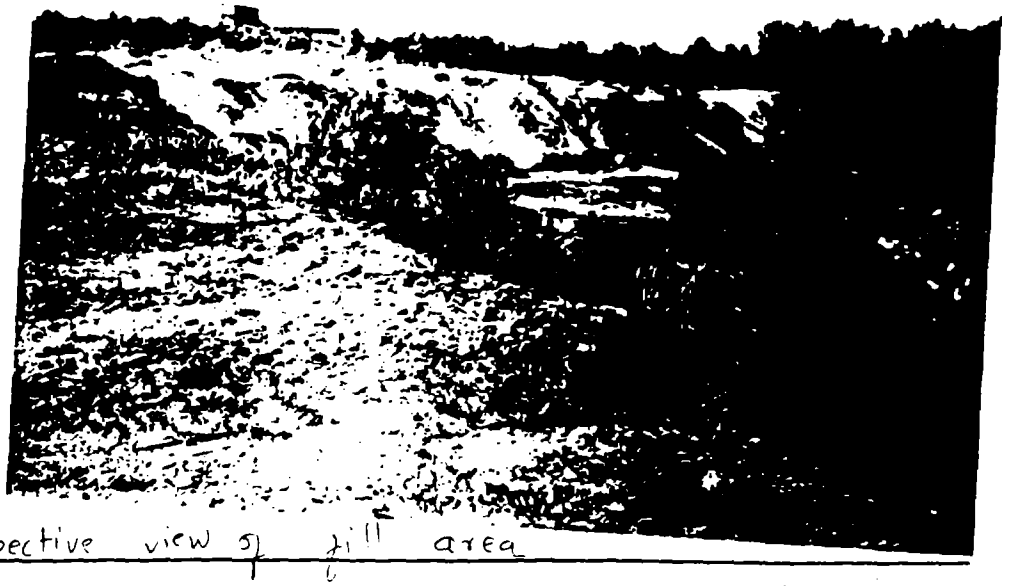
TIME: 14:25

DIRECTION OF PHOTOGRAPH: North west

WEATHER CONDITIONS: SUNNY ≈75° F

PHOTOGRAPHED BY: TANVEER ANJUM

SAMPLE ID (if applicable): N/A



DESCRIPTION: Perspective view of fill area and lower elevational area on west bank of lake.

DATE: 05/15/91

TIME: 16:25

DIRECTION OF PHOTOGRAPH: North

WEATHER CONDITIONS: SUNNY ≈ 75° F

PHOTOGRAPHED BY: TANVEER ANJUM

SAMPLE ID (if applicable): N/A

DESCRIPTION: Perspective view of fill area, lower elevational western bank of lake and building material debris dump area.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: BLUE LAKE INC PAGE 16 OF 16

U.S. EPA ID: IND046107157 TDD: F05-9009-007 PAN: FIN0697SB

DATE: 5/15/91 TIME: 15:30 DIRECTION OF PHOTOGRAPH: East PHOTOGRAPHED BY: Tanveer Anjum

WEATHER CONDITIONS: Sunny ~75°F SAMPLE ID (if applicable): N/A

DESCRIPTION: Western part of site - Fill area, Dirt road from Tibbs ave

APPENDIX D

U.S. EPA TARGET COMPOUND LIST AND TARGET ANALYTE LIST QUANTITATION/DETECTION LIMITS

NOTE

FOR

DRINKING WATER ORGANIC ANALYSIS DATA

DETECTION LIMIT: MARCH 1990

DRINKING WATER INORGANIC ANALYSIS DATA

DECTECTION LIMIT: APRIL 1988

SOIL ANALYSIS DATA

DETECTION LIMIT: JULY 1987

ADDENDUM C

SPECIAL ANALYTICAL SERVICES
DETECTION LIMITS

Drinking Water Samples

TARGET COMPOUND LIST (TCL) AND
CONTRACT REQUIRED QUANTITATION LIMITS (CRQL)

Volatiles	CAS Number	Quantitation Limits Water µg/L
1. Chloromethane	74-87-3	1
2. Bromomethane	74-83-9	1
3. Vinyl Chloride	75-01-4	1
4. Chloroethane	75-00-3	1
5. Methylene Chloride	75-09-2	2
6. Acetone	67-64-1	5
7. Carbon Disulfide	75-15-0	1
8. 1,1-Dichloroethene	75-35-4	1
9. 1,1-Dichloroethane	75-34-3	1
10. cis-1,2-Dichloroethene	156-59-4	1
11. trans-1,2-Dichloroethene	156-60-5	1
12. Chloroform	67-66-3	1
13. 1,2-Dichloroethane	107-06-2	1
14. 2-Butanone	78-93-3	5
15. Bromochloromethane	74-97-5	1
16. 1,1,1-Trichloroethane	71-55-6	1
17. Carbon Tetrachloride	56-23-5	1
18. Bromodichloromethane	75-27-4	1
19. 1,2-Dichloropropane	78-87-5	1
20. cis-1,3-Dichloropropene	10061-01-5	1
21. Trichloroethene	79-01-6	1
22. Dibromochloromethane	124-48-1	1
23. 1,1,2-Trichloroethane	79-00-5	1
24. Benzene	71-43-2	1
25. trans-1,3-Dichloropropene	10061-02-6	1
26. Bromoform	75-25-2	1
27. 4-Methyl-2-pentanone	108-10-1	5
28. 2-Hexanone	591-78-6	5
29. Tetrachloroethene	127-18-4	1

TARGET COMPOUND LIST (TCL) AND
CONTRACT REQUIRED QUANTITATION LIMITS (CRQL)
(CONT'D.)

Volatiles	CAS Number	Quantitation Limits Water µg/L
30. 1,1,2,2-Tetrachloroethane	79-34-5	.1
31. 1,2-Dibromoethane	106-93-4	1
32. Toluene	108-88-3	1
33. Chlorobenzene	108-90-7	1
34. Ethylbenzene	100-41-4	1
35. Styrene	100-42-5	1
36. Xylenes (total)	1330-20-7	1
37. 1,3-Dichlorobenzene	541-73-1	1
38. 1,4-Dichlorobenzene	106-46-7	1
39. 1,2-Dichlorobenzene	95-50-1	1
40. 1,2-Dibromo-3-chloropropane	96-12-8	1

TARGET COMPOUND LIST (TCL) AND
CONTRACT REQUIRED QUANTITATION LIMITS (CRQL)
(CONT'D.)

	Semivolatiles	CAS Number	Quantitation Limits Water µg/L
1.	Phenol	108-95-2	5
2.	bis-(2-Chloroethyl)ether	111-44-4	5
3.	2-Chlorophenol	95-57-8	5
4.	2-Methylphenol	95-48-7	5
5.	2,2'-oxybis(1-Chloropropane)	108-60-1	5
6.	4-Methylphenol	106-44-5	5
7.	N-Nitroso-di-n-propylamine	621-64-7	5
8.	Hexachloroethane	67-72-1	5
9.	Nitrobenzene	98-95-3	5
10.	Isophorone	78-59-1	5
11.	2-Nitrophenol	88-75-5	5
12.	2,4-Dimethylphenol	105-67-9	5
13.	bis-(2-Chloroethoxy)methane	11-91-1	5
14.	2,4-Dichlorophenol	120-83-2	5
15.	1,2,4-Trichlorobenzene	120-82-1	5
16.	Naphthalene	91-20-3	5
17.	4-Chloroaniline	106-47-8	5
18.	Hexachlorobutadiene	87-68-3	5
19.	4-Chloro-3-methylphenol	59-50-7	5
20.	2-Methylnaphthalene	91-57-6	5
21.	Hexachlorocyclopentadiene	77-47-4	5
22.	2,4,6-Trichlorophenol	88-06-2	5
23.	2,4,5-Trichlorophenol	95-95-4	20
24.	2-Chloronaphthalene	91-58-7	5
25.	2-Nitroaniline	88-74-4	20
26.	Dimethylphthalate	131-11-3	5
27.	Acenaphthylene	208-96-8	5
28.	2,6-Dinitrotoluene	606-20-2	5
29.	3-Nitroaniline	99-09-2	20
30.	Acenaphthene	83-32-9	5
31.	2,4-Dinitrophenol	51-28-5	20
32.	4-Nitrophenol	100-02-7	20
33.	Dibenzofuran	132-64-9	5

TARGET COMPOUND LIST (TCL) AND CONTRACT REQUIRED QUANTITATION LIMITS (CRQL) (CONT'D.)

	Semivolatiles	CAS Number	Quantitation Limits Water µg/L
1.	Phenol	108-95-2	5
2.	bis-(2-Chloroethyl)ether	111-44-4	5
3.	2-Chlorophenol	95-57-8	5
4.	2-Methylphenol	95-48-7	5
5.	2,2'-oxybis(1-Chloropropane)	108-60-1	5
6.	4-Methylphenol	106-44-5	5
7.	N-Nitroso-di-n-propylamine	621-64-7	5
8.	Hexachloroethane	67-72-1	5
9.	Nitrobenzene	98-95-3	5
10.	Isophorone	78-59-1	5
11.	2-Nitrophenol	88-75-5	5
12.	2,4-Dimethylphenol	105-67-9	5
13.	bis-(2-Chloroethoxy)methane	11-91-1	5
14.	2,4-Dichlorophenol	120-83-2	5
15.	1,2,4-Trichlorobenzene	120-82-1	5
16.	Naphthalene	91-20-3	5
17.	4-Chloroaniline	106-47-8	5
18.	Hexachlorobutadiene	87-68-3	5
19.	4-Chloro-3-methylphenol	59-50-7	5
20.	2-Methylnaphthalene	91-57-6	5
21.	Hexachlorocyclopentadiene	77-47-4	5
22.	2,4,6-Trichlorophenol	88-06-2	5
23.	2,4,5-Trichlorophenol	95-95-4	20
24.	2-Chloronaphthalene	91-58-7	5
25.	2-Nitroaniline	88-74-4	20
26.	Dimethylphthalate	131-11-3	5
27.	Acenaphthylene	208-96-8	5
28.	2,6-Dinitrotoluene	606-20-2	5
29.	3-Nitroaniline	99-09-2	20
30.	Acenaphthene	83-32-9	5
31.	2,4-Dinitrophenol	51-28-5	20
32.	4-Nitrophenol	100-02-7	20
33.	Dibenzofuran	132-64-9	5

TARGET COMPOUND LIST (TCL) AND
CONTRACT REQUIRED QUANTITATION LIMITS (CRQL)
(CONT'D.)

Pesticides/PCBs	CAS Number	Quantitation Limits Water µg/L
1. alpha-BHC	319-84-6	0.01
2. beta-BHC	319-85-7	0.01
3. delta-BHC	319-36-8	0.01
4. gamma-BHC (Lindane)	58-89-9	0.01
5. Heptachlor	76-44-8	0.01
6. Aldrin	309-00-2	0.01
7. Heptachlor epoxide	1024-57-3	0.01
8. Endosulfan I	959-98-8	0.01
9. Dieldrin	60-57-1	0.02
10. 4,4'-DDE	72-55-9	0.02
11. Endrin	72-20-8	0.02
12. Endosulfan II	33213-65-9	0.02
13. 4,4'-DDD	72-54-8	0.02
14. Endosulfan sulfate	1031-07-8	0.02
15. 4,4'-DDT	50-29-3	0.02
16. Methoxychlor	72-43-5	0.10
17. Endrin ketone	53494-70-5	0.02
18. Endrin aldehyde	7421-36-3	0.02
19. alpha-Chlordane	5103-71-9	0.01
20 gamma-Chlordane	5103-74-2	0.01
21. Toxaphene	8001-35-2	1.0
22. Aroclor-1016	12674-11-2	0.20
23. Aroclor-1221	11104-28-2	0.20
24. Aroclor-1232	11141-16-5	0.40
25. Aroclor-1242	53469-21-9	0.20
26. Aroclor-1248	12672-29-6	0.20
27. Aroclor-1254	11097-69-1	0.20
28. Aroclor-1260	11096-82-5	0.20

TARGET COMPOUND LIST (TCL) AND
CONTRACT REQUIRED QUANTITATION LIMITS (CRQL)
(CONT'D.)

	Semivolatiles	CAS Number	Quantitation Limits Water µg/L
34.	2,4-Dinitrotoluene	121-14-2	5
35.	Diethylphthalate	84-66-2	5
36.	4-Chlorophenyl-phenylether	7005-72-3	5
37.	Fluorene	86-73-7	5
38.	4-Nitroaniline	100-01-6	20
39.	4,6-Dinitro-2-methylphenol	534-52-1	20
40.	N-Nitrosodiphenylamine	86-30-6	5
41.	4-Bromophenyl-phenylether	101-55-3	5
42.	Hexachlorobenzene	118-74-1	5
43.	Pentachlorophenol	87-86-5	20
44.	Phenanthrene	85-01-8	5
45.	Anthracene	120-12-7	5
46.	Di-n-butylphthalate	84-74-2	5
47.	Fluoranthene	206-44-0	5
48.	Pyrene	129-00-0	5
49.	Butylbenzylphthalate	85-68-7	5
50.	3,3'-Dichlorobenzidine	91-94-1	5
51.	Benzo(a)anthracene	56-55-3	5
52.	Chrysene	218-01-9	5
53.	bis-(2-Ethylhexyl)phthalate	117-81-7	5
54.	Di-n-octylphthalate	117-84-0	5
55.	Benzo(b)fluoranthene	205-99-2	5
56.	Benzo(k)fluoranthene	207-08-9	5
57.	Benzo(a)pyrene	50-32-8	5
58.	Indeno(1,2,3-cd)pyrene	193-39-5	5
59.	Dibenz(a,h)anthracene	53-70-3	5
60.	Benzo(g,h,i)perylene	191-24-2	5

TABLE C (Cont.)
SAS DRINKING WATER
INORGANIC DETECTION LIMITS

PARAMETER	PROCEDURE	DETECTION LIMIT
Aluminum	ICP	100
Antimony	GFAA	5
Arsenic	GFAA	5
Barium	ICP	50
Beryllium	ICP	5
Cadmium	GFAA	0.5
Calcium	ICP	1000
Chromium	ICP	10
Cobalt	ICP	10
Copper	ICP	10
Iron	ICP	100
Lead	GFAA	2
Magnesium	ICP	1000
Manganese	ICP	10
Mercury	Cold Vapor	0.2
Nickel	ICP	20
Potassium	ICP	2000
Selenium	GFAA	2
Silver	ICP	5
Sodium	ICP	1000
Thallium	GFAA	2
Tin	ICP	40
Vanadium	ICP	10
Zinc	ICP	20
Cyanide	Colorimetric	10

Note: The above list may or may not contain compounds that are routinely analyzed at CRL for low level detection limits for drinking water.

See Inorganic Routine Analytical Services (RAS) for related CAS #.

ADDENDUM A

ROUTINE ANALYTICAL SERVICES
CONTRACT REQUIRED DETECTION AND QUANTITATION LIMITS

Contract Laboratory Program
Target Compound List
Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SEDIMENT SLUDGE
Chloromethane	74-87-3	10 ug/L	10 ug/Kg
Bromomethane	74-83-9	10	10
Vinyl chloride	75-01-4	10	10
Chloroethane	75-00-3	10	10
Methylene chloride	75-09-2	5	5
Acetone	67-64-1	10	5
Carbon disulfide	75-15-0	5	5
1,1-dichloroethene	75-35-4	5	5
1,1-dichloroethane	75-34-3	5	5
1,2-dichloroethene (total)	540-59-0	5	5
Chloroform	67-66-3	5	5
1,2-dichloroethane	107-06-2	5	5
2-butanone (MEK)	78-93-3	10	10
1,1,1-trichloroethane	71-55-6	5	5
Carbon tetrachloride	56-23-5	5	5
Vinyl acetate	108-05-4	10	10
Bromodichloromethane	75-27-4	5	5
1,2-dichloropropane	78-87-5	5	5
cis-1,3-dichloropropene	10061-01-5	5	5
Trichloroethene	79-01-6	5	5
Dibromochloromethane	124-48-1	5	5
1,1,2-trichloroethane	79-00-5	5	5
Benzene	71-43-2	5	5
Trans-1,3-dichloropropene	10061-02-6	5	5
Bromoform	75-25-2	5	5
4-Methyl-2-pentanone	108-10-1	10	10
2-Hexanone	591-78-6	10	10
Tetrachloroethene	127-18-4	5	5
Tolene	108-88-3	5	5
1,1,2,2-tetrachloroethane	79-34-5	5	5
Chlorobenzene	108-90-7	5	5
Ethyl benzene	100-41-4	5	5
Styrene	100-42-5	5	5
Xylenes (total)	1330-20-7	5	5

Table A
Contract Laboratory Program
Target Compound List
Semivolatiles Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SEDIMENT SLUDGE
Phenol	108-95-2	10 ug/L	330 ug/Kg
bis(2-Chloroethyl) ether	111-44-4	10	330
2-Chlorophenol	95-57-8	10	330
1,3-Dichlorobenzene	541-73-1	10	330
1,4-Dichlorobenzene	106-46-7	10	330
Benzyl Alcohol	100-51-6	10	330
1,2-Dichlorobenzene	95-50-1	10	330
2-Methylphenol	95-48-7	10	330
bis(2-Chloroisopropyl) ether	108-60-1	10	330
4-Methylphenol	106-44-5	10	330
N-Nitroso-di-n-dipropylamine	621-64-7	10	330
Hexachloroethane	67-72-1	10	330
Nitrobenzene	98-95-3	10	330
Isophorone	78-59-1	10	330
2-Nitrophenol	88-75-5	10	330
2,4-Dimethylphenol	105-67-9	10	330
Benzoic Acid	65-85-0	50	1600
bis(2-Chloroethoxy) methane	111-91-1	10	330
2,4-Dichlorophenol	120-83-2	10	330
1,2,4-Trichlorobenzene	120-82-1	10	330
Naphthalene	91-20-3	10	330
4-Chloroaniline	106-47-8	10	330
Hexachlorobutadiene	87-68-3	10	300
4-Chloro-3-methylphenol	59-50-7	10	330
2-Methylnaphthalene	91-57-6	10	330
Hexachlorocyclopentadiene	77-47-4	10	330
2,4,6-Trichlorophenol	88-06-2	10	330
2,4,5-Trichlorophenol	95-95-4	50	1600
2-Chloronaphthalene	91-58-7	10	330
2-Nitroaniline	88-74-4	50	1600
Dimethylphthalate	131-11-3	10	330
Acenaphthylene	208-96-8	10	330
2,6-Dinitrotoluene	606-20-2	10	330
3-Nitroaniline	99-09-2	50	1600
Acenaphthene	83-32-9	10	330
2,4-Dinitrophenol	51-28-5	50	1600
4-Nitrophenol	100-02-7	50	1600
Dibenzofuran	132-64-9	10	330
2,4-Dinitrotoluene	121-14-2	10	330
Diethylphthalate	84-66-2	10	330
4-Chlorophenyl-phenyl ether	7005-72-3	10	330

Table A
Contract Laboratory Program
Target Compound List
Semivolatiles Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SLUDGE SEDIMENT
Fluorene	86-73-7	10 ug/L	330 ug/Kg
4-Nitroaniline	100-01-6	50	1600
4,6-Dinitro-2-methylphenol	534-52-1	50	1600
N-nitrosodiphenylamine	86-30-6	10	330
4-Bromophenyl-phenylether	101-55-3	10	330
Hexachlorobenzene	118-74-1	10	330
Pentachlorophenol	87-86-5	50	1600
Phenanthrene	85-01-8	10	330
Anthracene	120-12-7	10	330
Di-n-butylphthalate	84-74-2	10	330
Fluoranthene	206-44-0	10	330
Pyrene	129-00-0	10	330
Butylbenzylphthalate	85-68-7	10	330
3,3'-Dichlorobenzidine	91-94-1	20	660
Benzo(a)anthracene	56-55-3	10	330
Chrysene	218-01-9	10	330
bis(2-Ethylhexyl)phthalate	117-81-7	10	330
Di-n-octylphthalate	117-84-0	10	330
Benzo(b)fluoranthene	205-99-2	10	330
Benzo(k)fluoranthene	207-08-9	10	330
Benzo(a)pyrene	50-32-8	10	330
Indeno(1,2,3-cd)pyrene	193-39-5	10	330
Dibenz(a,h)anthracene	53-70-3	10	330
Benzo(g,h,i)perylene	191-24-2	10	330

Table A
Contract Laboratory Program
Target Compound List
Pesticide and PCB Quantitation Limits

COMPOUND	CAS #	WATER	SOIL SEDIMENT SLUDGE
alpha-BHC	319-84-6	0.05 ug/L	8 ug/Kg
beta-BHC	319-85-7	0.05	8
delta-BHC	319-86-8	0.05	8
gamma-BHC (Lindane)	58-89-9	0.05	8
Heptachlor	76-44-8	0.05	8
Aldrin	309-00-2	0.05	8
Heptachlor epoxide	1024-57-3	0.05	8
Endosulfan I	959-98-8	0.05	8
Dieldrin	60-57-1	0.10	16
4,4'-DDE	72-55-9	0.10	16
Endrin	72-20-8	0.10	16
Endosulfan II	33213-65-9	0.10	16
4,4'-DDD	72-54-8	0.10	16
Endosulfan sulfate	1031-07-8	0.10	16
4,4'-DDT	50-29-3	0.10	16
Methoxychlor (Mariate)	72-43-5	0.5	80
Endrin ketone	53494-70-5	0.10	16
alpha-Chlordane	5103-71-9	0.5	80
gamma-chlordane	5103-74-2	0.5	80
Toxaphene	8001-35-2	1.0	160
AROCLOR-1016	12674-11-2	0.5	80
AROCLOR-1221	11104-28-2	0.5	80
AROCLOR-1232	11141-16-5	0.5	80
AROCLOR-1242	53469-21-9	0.5	80
AROCLOR-1248	12672-29-6	0.5	80
AROCLOR-1254	11097-69-1	1.0	160
AROCLOR-1260	11096-82-5	1.0	160

Table A (Cont.)

CONTRACT LABORATORY PROGRAM
TARGET ANALYTE LIST (TAL)
INORGANIC DETECTION LIMITS

Compound	Procedure	Detection Limits: Water (µg/L)	Detection Limits: Soil Sediment Sludge (mg/kg)
aluminum	ICP	200	40
antimony	furnace	60	2.4
arsenic	furnace	10	2
barium	ICP	200	40
beryllium	ICP	5	1
cadmium	ICP	5	1
calcium	ICP	5,000	1,000
chromium	ICP	10	2
cobalt	ICP	50	10
copper	ICP	25	5
iron	ICP	100	20
lead	furnace	5	1
magnesium	ICP	5,000	1,000
manganese	ICP	15	3
mercury	cold vapor	0.2	0.008
nickel	ICP	40	8
potassium	ICP	5,000	1,000
selenium	furnace	5	1
silver	ICP	10	2
sodium	ICP	5,000	1,000
thallium	furnace	10	2
tin	ICP	40	8
vanadium	ICP	50	10
zinc	ICP	20	4
cyanide	color	10	2

3767:1

Rev 7/87

E

APPENDIX E

WELL LOGS OF THE AREA OF THE SITE

DIVISION OF WATER
DEPARTMENT OF NATURAL RESOURCES, STATE OF INDIANA
STATE OFFICE BUILDING
INDIANAPOLIS, INDIANA 46209

HW1

JUN 1969
RECEIVED
DEPT. OF NATURAL RESOURCES
DIVISION OF WATER

WATER WELL RECORD

INFORMATION ON WELL LOCATION

County in which well was drilled: Marion Civil Township: _____

Congressional township: _____ Range: _____ Number of section: ____

(Fill in as completely as possible)

Describe in your own words the well location with respect to nearby towns, roads, streets or distinctive landmarks: _____

(2600 W)

Name of owner: Hugh McClain Address: 1306 So. Belford

Name of Well Drilling Contractor: Allen Murdock Well

Address: 4701 W. Morris Street

Name of Drilling Equipment Operator: Allen Murdock

INFORMATION ON THE WELL

Completed depth of well: 94 ft. Date well was completed: 6-17-69

Diameter of outside casing or drive pipe: 4" Length: _____

Diameter of inside casing or liner: _____ Length: _____

Diameter of Screen: 4" Length: _____ Slot size: _____

Type of Well: Drilled ☒ Gravel Pack ☐ Driven ☐ Other _____

Use of Well: For home ☐ For industry ☒ For public supply ☐ Stock ☐

Method of Drilling: Cable Tools ☐ Rotary ☒ Rev. Rotary ☐ Jet ☐ Driven ☐

Static water level in completed well (Distance from ground to water level) 30 ft

Bailer Test: Hours tested ____ Rate ____ g.p.m. Drawdown ____ ft. (Difference between static level and wa

Pumping Test: Hours tested ____ Rate 20 g.p.m. Drawdown ____ ft. level at end of tes

Signature Allen Murdock

Date June 18-69

FOR WELL LOG SPACE USE REVERSE SIDE OF THIS SHEET

(Well driller does not fill out)

COUNTY: Marion TWP. 15N RGE. 3E SW ¼ NW ¼ NE ¼ SEC. 16

Topo Map: Maywood

Well log classified	By 112781	Date	
Courthouse located	By	Date	
Field located	By	Date	
Acc. w/o verification	By	Date	

Ft W of EL.	Ground elevation	
Ft N of SL.	Depth to bedrock	
Ft E of WL.	Bedrock elevation	
Ft S of NL.	Aquifer elevation	

WATER WELL LOG

FORMATIONS (Color, type of material, hardness, etc.)	From	To
Top Soil	0	3
Blue Clay	3	40
Gravel 8	40	48
Grey - Yellow Clay	48	78
Gravel 16	78	94

REMARKS:

INSTRUCTIONS

This Water Well Record form is designed to record the most essential data concerning a well. We request that you be as accurate as possible in recording this information as it may be of great assistance in the planning and development of new water supplies.

An accurate location of the well is equally as important as an accurate well log. Please include all information possible in the space provided for well location.

As specified in Chapter 6 of the Acts of 1959, a copy of this report must be submitted within thirty days after the completion of a well to the Division of Water

S-47

HVV2

LAYNE-NORTHERN COMPANY

Incorporated

MISHAWAKA, INDIANA

☐ TEST

☐ PERMANENT

Job No. _____

WELL LOG No. 1 CITY _____ County _____

Owner Republic Creosoting Co. Township _____

Section _____

Location _____ State _____

From Land Description _____ ft. East and _____ ft. North of SW Corner of Section.

From Street or Road 300ft N. of S. property line, 150' W of Tibbs Ave.

FORMATION FOUND — DESCRIBE FULLY	FROM NATURAL GROUND LEVEL			
	Depth to Top of Stratum	Depth to Bottom of Stratum	Thickness of Stratum	Static Water Level
Fill clay & cinders	0	4		
Sand gravel	4	55		
Blue clay	55	bottom		

5d/4

_____ inch diameter hole drilled by ☐ Cable Tool ☐ Rotary ☐ Jetting

Pipe left in hole _____

Date Started _____ Finished _____

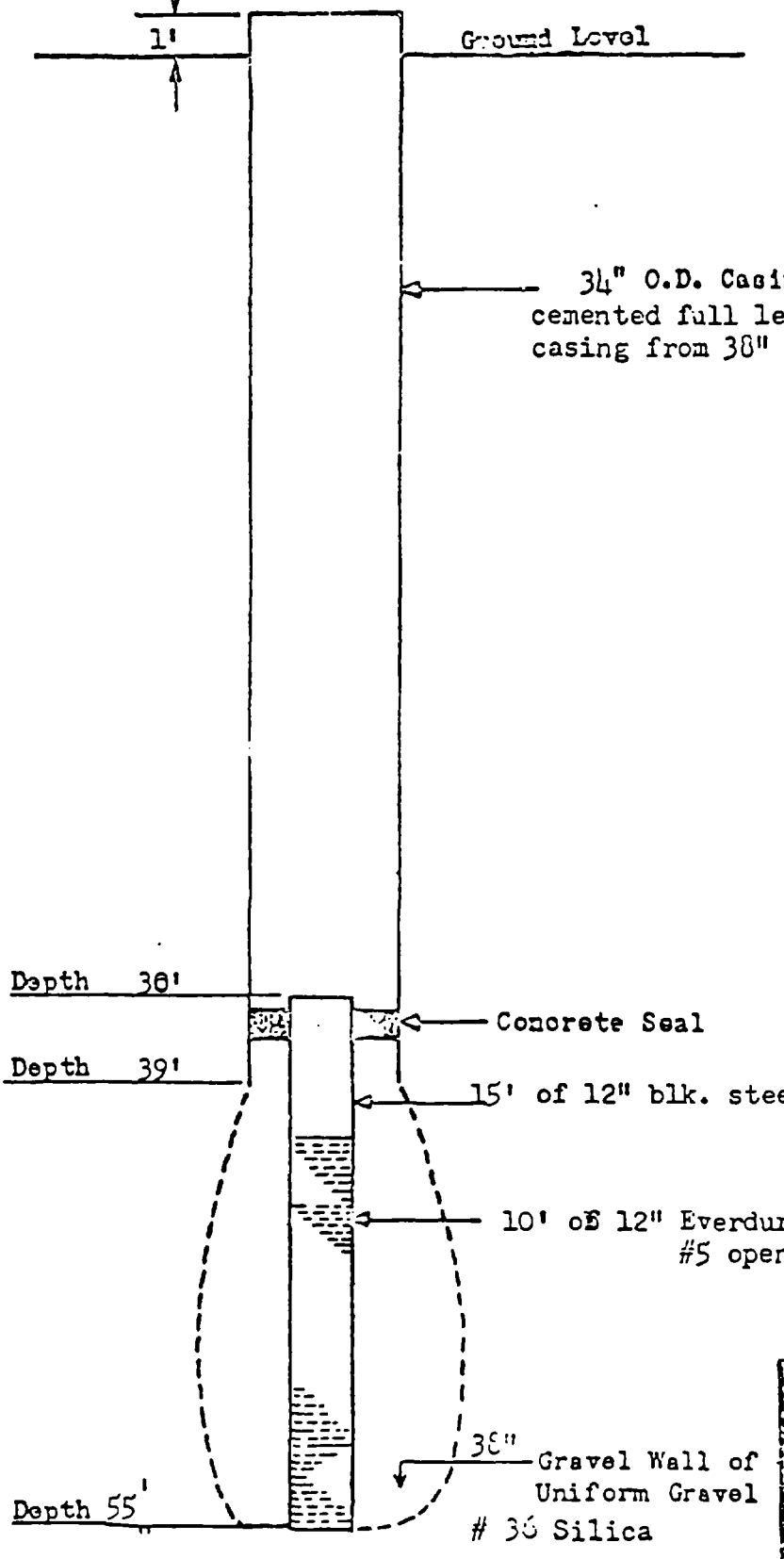
T 15N, R 3E, Sec 17 NE, SE

Casing extends 1' feet above ground level.

Job No. C-8082

Location:

Marion County
Wayne Twp.
SEC 17, T15N
Ind.
300' N of S property line
150' W of Tibbs Ave.



Single Cased
LAYNE GRAVEL WALL WELL No. 7
For
Republic Creosoting Co
Indianapolis, Ind
1800 S. Tibbs

Driller C. Carvile

Date Finished 9/5/58

Not drawn to Scale
All depths measured from ground level

Static Level 21'

Pumped 584 GPM

LAYNE NORTHERN CO. INC.
MISHAWAKA, INDIANA

DRAWN BY

APPROVED BY

DRAWING NO.

FOR ADMINISTRATIVE USE ONLY
(Well driller does not fill out)

COUNTY Marion TWP. 15N RGE. 3E ¼ NE ¼ SE SEC 17 Subdivision Name

Topo Map _____ Ft W of EL. Ground Elevation _____

Field Located By _____ Date _____ Ft N of SL. Depth to bedrock _____

Courthouse Location By _____ Date _____ Ft E of WL. Bedrock elevation _____

Location accepted w/o verification by _____ Ft S of NL. Aquifer elevation _____ Lot Number _____

WATER WELL LOG

To	From	FORMATIONS (Color, type of material, hardness, etc.)

S 45

DIVISION OF WATER RESOURCES
INDIANA DEPARTMENT OF CONSERVATION
311 WEST WASHINGTON STREET
INDIANAPOLIS, INDIANA

WATER WELL RECORD

INFORMATION ON WELL LOCATION

County in which well was drilled: Marion Civil Township: _____

Congressional township: _____ Range: _____ Number of section: _____

(Fill in as completely as possible)

Describe in your own words the well location with respect to nearby towns, roads, streets or distinctive landmarks: North East corner of Holt Rd. and Minnasota St.

Name of owner: Bridgeport Brass Pony League Address: Holt Rd. and Minn. St.

Name of Well Drilling Contractor: C.C.Hamilton

Address: 2912 East Murry St.

Name of Drilling Equipment Operator: Same

INFORMATION ON THE WELL

Completed depth of well: 62 ft. Date well was completed: April 27, 1960

Diameter of outside casing or drive pipe: 4 inch Length: 59 ft.

Diameter of inside casing or liner: _____ Length: _____

Diameter of Screen: 3 ft. Length: 5 ft Slot size: 6

Type of Well: Drilled ☑ Gravel Pack ☐ Driven ☐ Other _____

Use of Well: For home ☐ For industry ☑ For public supply ☐ Stock ☐

Method of Drilling: Cable Tools ☑ Rotary ☐ Rev. Rotary ☐ Jet ☐ Driven ☐

Static water level in completed well (Distance from ground to water level) 15 ft.

Bailer Test: Hours tested 1 Rate 600 g.p.H. Drawdown 20 ft. (Difference between static level and water level at end of test)

Pump Test: Hours tested _____ Rate _____ g.p.m. Drawdown _____ ft.

Signature C.C.Hamilton

Date _____

WATER WELL LOG

COUNTY: Marion TWP. 15N RGE. 3E SW ¼ SW ¼ NE ¼ SEC. 17

Topo. Map: Maywood 7½ — Loc. accepted w/o verification Yes ✓ No

El. of grnd. surface at well: 707± — Courthouse Loc. By ___ Date ___

Depth to bedrock: 645– — Field Located By ___ Date ___

Well Log processed by: DG - 4 — Placed in Master Well Log File Date WD 1/02/62

FORMATIONS (Color, type of material, hardness, etc.)	From	To
Top soil	0	6
Sand	6	40
Clay Hard	40	50
Sand Gravel	50	62
12		
25 25		
707 −15 692 WL		
80' ?		

REMARKS: graphic log

INSTRUCTIONS

This Water Well Record form is designed to record the most essential data concerning ter well. We request that you be as accurate as possible in recording this information may be of great assistance in the planning and development of new water supplies.

An accurate location of the well is equally as important as an accurate well log. Please include all information possible in the space provided for well location.

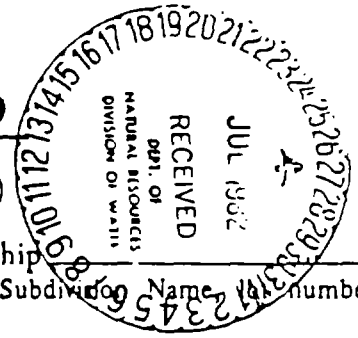
As specified in Chapter 6 of the Acts of 1959, a copy of this report must be submitte within thirty days after the completion of a well to the Division of Water Resources, Indi Department of Conservation, 311 West Washington Street, Indianapolis, Indiana.

MW4

DIVISION OF WATER
DEPARTMENT OF NATURAL RESOURCES, STATE OF INDIANA
STATE OFFICE BUILDING
INDIANAPOLIS, INDIANA 46204

State Form 35680

Telephone 317-232-4160



WATER WELL RECORD

WELL LOCATION

(Fill in completely - Refer to instruction sheet)

County in which well was drilled Marion Civil Township _____

Driving directions to the well location: Include County Road Names, Numbers, Subdivision Name, lot number, distinct landmarks, etc.

NAME OF WELL OWNER and/or BUILDING CONTRACTOR W 2603

Well Owner Ind Battery Address 1300 S Bedford

Building Contractor _____ Address _____

Name of Well Drilling Contractor: Matlock

Address 4701 W. Main

Name of Drilling Equipment Operator: Allen Matlock

WELL INFORMATION

Depth of well: 92 Date well was completed: 7-19-82

Diameter of casing or drive pipe: _____ Total Length: _____

Diameter of liner (if used): _____ Total Length: _____

Diameter of Screen: 4" Length: 5' Slot Size: #6

Type of Well: Drilled ☑ Gravel Pack ☐ Driven ☐ Other _____

Use of Well: For Home ☐ For Industry ☑ For Public Supply ☐ Stock ☐

Method of Drilling: Cable Tools ☐ Rotary ☑ Rev. Rotary ☐ Jet ☐ Bucket Rig ☐

Static water level in completed well (Distance from ground to water level) 20 feet

Bailer Test: Hours Tested _____ Rate _____ g.p.m. Drawdown _____ ft.

Pumping Test: Hours Tested _____ Rate 10 g.p.m. Drawdown _____ ft.

(Drawdown is the difference between static level and water level at end of test)

Signature Allen Matlock

Date 7-21-82

WATER WELL LOG

FORMATIONS (Color, type of material, hardness, etc.)	From	To
Top Soil	0	3
Gravel	3	35
Clay	35	70
Gravel	70	75
Clay	75	92

COUNTY Marion TWP. 15N RGE. 3E ¼ NW ¼ NE SEC 16

Topo Map Indianapolis West 7½ Subdivision Name

Field Located By _____ Date _____ Ft W of EL _____ Ground Elevation _____

Courthouse Location By _____ Date _____ Ft N of SL. _____ Depth to bedrock _____

Location accepted w/o verification by _____ Ft E of WL. _____ Bedrock elevation _____

Ft S of NL. _____ Aquifer elevation _____ Lot Number _____

(Well driller does not fill out)

WATER WELL RECORD

State Form 35680R

DIVISION OF WATER
INDIANA DEPARTMENT OF NATURAL RESOURCES
605 STATE OFFICE BUILDING
INDIANAPOLIS, INDIANA 46204
PHONE (317) 232-4160

RW5

WELL LOCATION (Fill in completely)

y where drilled
Paro Marion

il To

iving directions to the well location (include county road names, numbers, subdivisions, lot number with consideration to intersecting roads and trip origina-) There is space for a map on reverse side.

Northeast corner of Minnesota ST.
and Holt Rd. - west Test Hole #1
supply well).

NW 26 T15 9500N

OWNER — CONTRACTOR

Well owner
Sweet and Co.

Address
9502 Angola Ct., Indianapolis, IN 462

Building contractor

Address

Drilling contractor
Busby Drilling Co., Inc.

Address
R.R. #6 Box 345, Anderson, IN 45011

Equipment operator
William B. Hobbs, Jr.

Completion date
06-19-85

CONSTRUCTION DETAILS

l well:
lled ☐ Gravel pack ☐ Driven ☐ Other

of well:
me ☒ Industry ☒ est ☐ Irrigation
Public supply ☐ Stock ☐ Other (specify) _____

d of drilling:
b ☒ Rotary ☐ Jet ☐ Rev rotary ☐ Bucket rig

ing le 91' feet	Diameter 5" PVC inches
length overall feet	Diameter 5" I.D. inches
een slot size .) stainless steel	Total depth 109'

)... of pump setting

f pump
Submersible ☐ Shallow-well jet ☐ Deep-well jet ☐ Other (specify) _____

WELL CAPACITY TEST

e one)
lling ☒ Pumping

l rate 75 gpm	2 hrs	Drawdown 76' feet
l level 18' feet		

p to water)

ter quality (clear, cloudy, odor, etc.)
clear

WELL LOG

Formations: type of material	From	To
sand and gravel	0 ft.	2'-6"
red clay	2'-6"	7
boulders and fine sand		
(pit run)	7	21
fine to medium gravel	21	25
medium gravel	25	31
gray clay	31	58
medium to coarse gravel		
#50 slot	58	67
gravel and gray clay		
balls	67	71
gray clay	71	74
fine to medium gravel		
#40 slot	74	94

(Additional space for Well Log on reverse side)

over....

n
William B. Hobbs, Jr., President William B. Hobbs, Jr. Date 8-9-85

County	Twp.	Rge.	¼ SW ¼ NE	Sec.
Marion	15N	3E		17

Topo map		Ground elevation	Subdivision name
Maywood 7½	Ft. W of EL		
Field located By Date	Ft. N of SL	Depth to bedrock	Lot no.
Courthouse location By Date	Ft. E of WL	Bedrock elevation	
Location accepted w/o verification by	Ft. S of NL	Aquifer elevation	

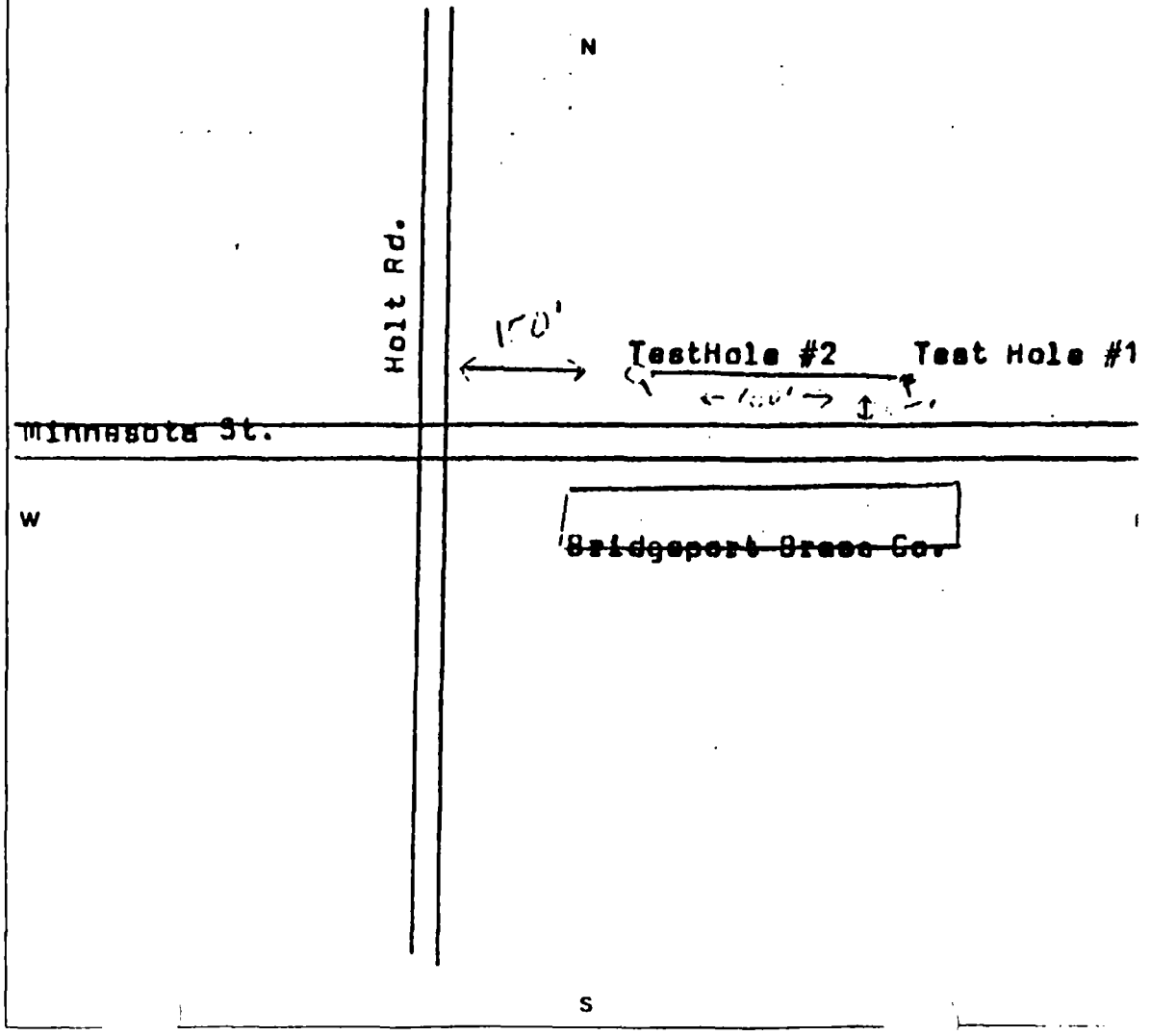
WELL LOG

(Continued from front side)

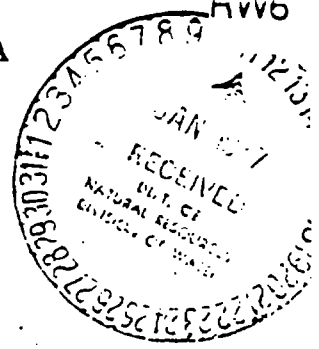
Formations: type of material	From	To
gray clay	94 ft	107 ft
brown shale	107	109

SKETCH SHOWING LOCATION

Locate with reference to highways, intersecting county roads, and distinctive landmarks.



DIVISION OF WATER
DEPARTMENT OF NATURAL RESOURCES, STATE OF INDIANA
STATE OFFICE BUILDING
INDIANAPOLIS, INDIANA 46204
Telephone 633-5267 Area Code 317



WATER WELL RECORD

WELL LOCATION

(Fill in completely - Refer to instruction sheet)

County in which well was drilled Marion Civil Township

Driving directions to the well location: Include County Road Names, Numbers, Subdivision Name, lot number, distii landmarks, etc.

2600 West

720 S. Holmes

NAME OF WELL OWNER and/or BUILDING CONTRACTOR

Well Owner Christ Place Address 720 S. Holmes

Building Contractor — Address

Name of Well Drilling Contractor: Manford Dean

Address 241 W. Sumner Road

Name of Drilling Equipment Operator: John Caudlebridge

WELL INFORMATION

Depth of well: 106 Date well was completed: Sept 28-76

Diameter of casing or drive pipe: 4 Total Length: 106

Diameter of liner (if used): Total Length:

Diameter of Screen: 3 Length: 5 Slot Size: 30

Type of Well: Drilled ☑ Gravel Pack ☐ Driven ☐ Other

Use of Well: For Home ☑ For Industry ☐ For Public Supply ☐ Stock ☐

Method of Drilling: Cable Tools ☑ Rotary ☐ Rev. Rotary ☐ Jet ☐ Bucket Rig ☐

Static water level in completed well (Distance from ground to water level) 32

Bailer Test: Hours Tested Rate g.p.m. Drawdown ft.

Pumping Test: Hours Tested 1 Rate 15 g.p.m. Drawdown 3 ft.

(Drawdown is the diffe between static level and level at end of test)

Signature Manford Dean

Date Jan 6-77

FOR WELL LOG SPACE USE REVERSE SIDE OF THIS SHEET

WATER WELL LOG

FORMATIONS (Color, type of material, hardness, etc.)	From	To
Clay	0	15
Sand & Gravel (Salty)	15	64
Sand & Gravel Salty	64	69
Gray Hard pan	69	78
Sand & Gravel	78	106

COUNTY Marion TWP. 15N RGE. 3E ¼ NW ¼ SE SEC 9

Topo Map Ladoga 7½ West

Field Located By _____ Date _____

Courthouse Location By _____ Date _____

Location accepted w/o verification by Bruns 2-8-77

FOR ADMINISTRATIVE USE ONLY
(Well driller does not fill out)

Ft W of EL. _____ Ground Elevation _____ Subdivision Name _____

Ft N of SL. _____ Depth to bedrock _____

Ft E of WL. _____ Bedrock elevation _____

Ft S of NL. _____ Aquifer elevation _____ Lot Number _____

RW7

Layne NORTHERN COMPANY INCORPORATED

INDIANAPOLIS • MISHAWAKA • LANSING

☐ TEST

☑ PERMANENT

Job No. C-21315

WELL LOG No. 7 CITY Indianapolis, Indiana County Marion

Owner Bridgeport Brass Company Township Wayne

Section 16

Location State Indiana

From Land Description 50' East of fence, 63' South of Sub-Station

From Street or Road In well field South of Minnesota Street

FORMATION FOUND – DESCRIBE FULLY	FROM NATURAL GROUND LEVEL			
	Depth to Top of Stratum	Depth to Bottom of Stratum	Thickness of Stratum	Static Water Level
Sand and gravel	0	18	18	
Med. Sand and gravel	18	35	17	
Coarse sand and gravel	35	55	20	
Fine sand	55	57	2	
Coarse sand and gravel	57	69	12	
blue clay	69	76	7	
Med. gravel	76	100	24	
Coarse gravel	100	105	5	40
shale	105			
Bedrock				

Hole 72 "Dia Drilled by: Cable Tool ____ Rotary ____ Jetting ____ Reverse Circ. X Bucket ____ Auger ____

Rotary Hole Grouted: Neat Cement ____ Drilling Mud ____ Other ____

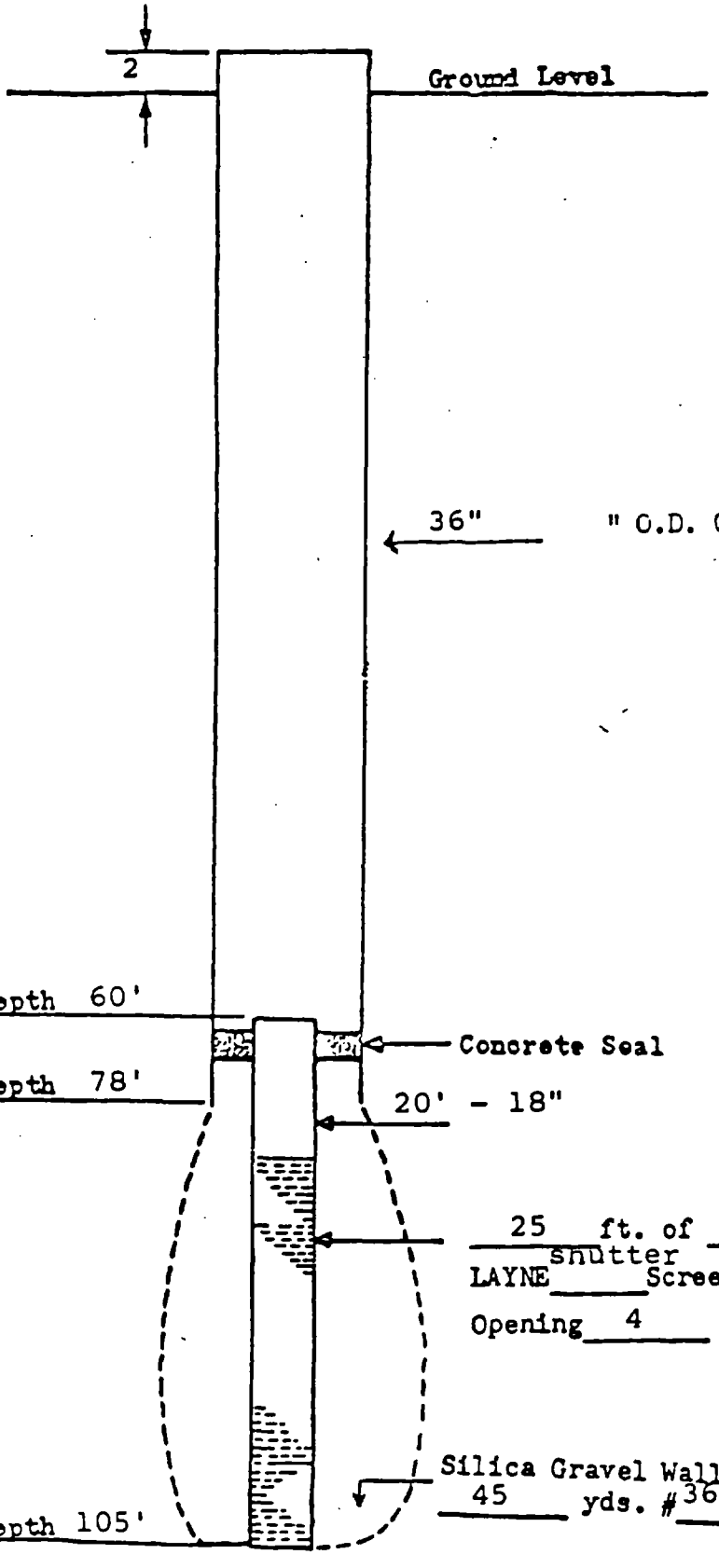
Casing ____ "OD From ____ "above ground to ____ feet below ground. Weight ____ Pounds per foot

Screen 18 " Set from 105' to 80' feet Make Layne Type stainless steel #4

1200 GPM drawdown to 51' feet after 8 hours pumping

Casing extends 2 feet above ground level.

Job No. C-21315



Location from Street or Road
20' S of TW68A, 63' S of
Sub Station ℄, 50' E of fence
187' W of Sub Station ℄

County Marion

Township Wayne

Section 16

Spac. Cap
1200/11 = 109

Driller E. Allen

Date Finished 5-10-68

Not drawn to Scale
All depths measured from ground level

Static Level 40'
Pumped 1200 GPM
at 51' Pumping Level

Single Cased
LAYNE GRAVEL WALL WELL No. 7
For

BRIDGEPORT BRASS COMPANY
INDIANAPOLIS, INDIANA

LAYNE NORTHERN CO. INC.
MISHAWAKA, INDIANA

DRAWN BY
APPROVED BY
DATE

DRAWING NO.

WATER WELL LOG

Description (Color, type of material, hardness, etc.)	From	To

REMARKS:

FOR ADMINISTRATIVE USE ONLY
(Well driller does not fill out)

COUNTY: Marion TWP. 15N RGE. 3E ___ ¼ ___ ¼ ___ ¼ SEC. 16

Topo Map: Maywood 7½

	By	Date		
Well log classified	[illegible]	6/68	___ Ft W of EL.	Ground elevation ___
Courthouse located	—	—	___ Ft N of SL.	Depth to bedrock ___
Field located	—	—	___ Ft E of WL.	Bedrock elevation ___
Acc. w/o verification	[illegible]	5/68	___ Ft S of NL.	Aquifer elevation ___

INSTRUCTIONS

This Water Well Record form is designed to record the most essential data concerning a water well. We request that you be as accurate as possible in recording this information as it may be of great assistance in the planning and development of new water supplies.

An accurate location of the well is equally as important as an accurate well log. Please include all information possible in the space provided for well location.

As specified in Chapter 6 of the Acts of 1959, a copy of this report must be submitted ... the Division of Water